

SEQUENCE LISTING

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Fruebis, Joachim
Bihain, Bernard

<120> Methods Of Screening For Compounds That Modulate the LSR-Leptin Interaction and Their Use in the Prevention and Treatment of Obesity-Related Diseases

<130> 70.US2.REG

<150> 60/155,506
<151> 1999-09-22

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Arg Asp	Ala Arg	Ala Arg	Ala Gln	Thr Ala Ala	Met Ala Leu	Leu
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Ala Pro	Ala Arg	Ala Ile	Gln Val	Thr Val	Ser Asn Pro	Tyr His
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Val Ile	Leu Phe	Gln Pro	Val Thr	Leu Pro	Cys Thr	Tyr Gln Met
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Leu Phe	Val Val	Val Val	Cys Leu	Ala Ala	Phe Leu	Ile Phe Leu
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	Gly Gly Arg Ser Arg Ala Tyr Met Pro Pro Arg Ser Arg Ser Arg Asp			
	520 525	530		
	gac ctc tat gac caa gac gac tcg agg gac ttc cca cgc tcc ccg gac			1747
	Asp Leu Tyr Asp Gln Asp Asp Ser Arg Asp Phe Pro Arg Ser Arg Asp			
	535 540	545		
	ccc cac tac gac gac ttc agg tct cgg gag cgc cct cct gcc gac ccc			1795
	Pro His Tyr Asp Asp Phe Arg Ser Arg Glu Arg Pro Pro Ala Asp Pro			
	550 555	560		
	agg tcc cac cac cac cgt acc cgg gac cct cgg gac aac ggc tcc agg			1843
	Arg Ser His His Arg Thr Arg Asp Pro Arg Asp Asn Gly Ser Arg			
	565 570	575 580		
	tcc ggg gac ctc ccc tat gat ggg cgg cta ctg gag gag gct gtg agg			1891
	Ser Gly Asp Leu Pro Tyr Asp Gly Arg Leu Leu Glu Glu Ala Val Arg			
	585 590	595		
	aag aag ggg tcg gag gag agg aga ccc cac aag gag gag gag gaa			1939
	Lys Lys Gly Ser Glu Glu Arg Arg Pro His Lys Glu Glu Glu Glu			
	600 605	610		
	gag gcc tac tac ccg ccc gcg ccg ccc ccg tac tcg gag acc gac tcg			1987
	Glu Ala Tyr Tyr Pro Pro Ala Pro Pro Pro Tyr Ser Glu Thr Asp Ser			
	615 620	625		
	cag gcg tcc cga gag cgc agg ctc aag aag aac ttg gcc ctg agt cgg			2035
	Gln Ala Ser Arg Glu Arg Arg Leu Lys Lys Asn Leu Ala Leu Ser Arg			
	630 635	640		
	gaa agt tta gtc gtc tga tctgacgttt tctacgtac ttttgkattt			2083
	Glu Ser Leu Val Val *			

645 650
 ttttttttaa tttgaaggaa cactgatgaa gccctgccat acccctcccg agtctaataa 2143
 aacgtataat caca 2158

<210> 3
 <211> 649
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 363
 <223> 9-7-325 : polymorphic amino acid Ser or Asn

<220>
 <221> VARIANT
 <222> 420
 <223> 9-9-246 : polymorphic amino acid Pro or Arg

<220>
 <221> VARIANT
 <222> 519
 <223> LSRX9f13-BM : polymorphic amino acid deletion of Arg

<400> 3
 Met Gln Gln Asp Gly Leu Gly Val Gly Thr Arg Asn Gly Ser Gly Lys
 1 5 10 15
 Gly Arg Ser Val His Pro Ser Trp Pro Trp Cys Ala Pro Arg Pro Leu
 . 20 25 30
 Arg Tyr Phe Gly Arg Asp Ala Arg Ala Arg Arg Ala Gln Thr Ala Ala
 . 35 40 45
 Met Ala Leu Leu Ala Gly Gly Leu Ser Arg Gly Leu Gly Ser His Pro
 . 50 55 60
 Ala Ala Ala Gly Arg Asp Ala Val Val Phe Val Trp Leu Leu Leu Ser
 . 65 70 75 80
 Thr Trp Cys Thr Ala Pro Ala Arg Ala Ile Gln Val Thr Val Ser Asn
 . 85 90 95
 Pro Tyr His Val Val Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr
 . 100 105 110
 Tyr Gln Met Thr Ser Thr Pro Thr Gln Pro Ile Val Ile Trp Lys Tyr
 . 115 120 125
 Lys Ser Phe Cys Arg Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser
 . 130 135 140
 Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr
 . 145 150 155 160
 Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg Thr Val Arg Val Val
 . 165 170 175
 Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly
 . 180 185 190
 Arg Arg Ile Thr Ile Thr Gly Asn Ala Asp Leu Thr Phe Asp Gln Thr
 . 195 200 205
 Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln
 . 210 215 220
 Asp Leu Gln Gly Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Gly
 . 225 230 235 240
 Arg Thr Ser Gly Val Ala Glu Leu Leu Pro Gly Phe Gln Ala Gly Pro
 . 245 250 255
 Ile Glu Asp Trp Leu Phe Val Val Val Cys Leu Ala Ala Phe Leu
 . 260 265 270
 Ile Phe Leu Leu Leu Gly Ile Cys Trp Cys Gln Cys Cys Pro His Thr
 . 275 280 285
 Cys Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro Asp Lys Cys Cys Cys
 . 290 295 300

Pro Glu Ala Leu Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro
 305 310 315 320
 Ser Ile Tyr Ala Pro Ser Thr Tyr Ala His Leu Ser Pro Ala Lys Thr
 325 330 335
 Pro Pro Pro Ala Met Ile Pro Met Gly Pro Ala Tyr Asn Gly Tyr
 340 345 350
 Pro Gly Gly Tyr Pro Gly Asp Val Asp Arg Ser Ser Ala Gly Gly
 355 360 365
 Gln Gly Ser Tyr Val Pro Leu Leu Arg Asp Thr Asp Ser Ser Val Ala
 370 375 380
 Ser Glu Val Arg Ser Gly Tyr Arg Ile Gln Ala Ser Gln Gln Asp Asp
 385 390 395 400
 Ser Met Arg Val Leu Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp
 405 410 415
 Pro Ser Arg Pro Gly Pro Pro Ser Gly Arg Val Glu Arg Ala Met Ser
 420 425 430
 Glu Val Thr Ser Leu His Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg
 435 440 445
 Gly Pro Ala Leu Thr Pro Ile Arg Asp Glu Glu Trp Gly Gly His Ser
 450 455 460
 Pro Arg Ser Pro Arg Gly Trp Asp Gln Glu Pro Ala Arg Glu Gln Ala
 465 470 475 480
 Gly Gly Gly Trp Arg Ala Arg Arg Pro Arg Ala Arg Ser Val Asp Ala
 485 490 495
 Leu Asp Asp Leu Thr Pro Pro Ser Thr Ala Glu Ser Gly Ser Arg Ser
 500 505 510
 Pro Thr Ser Asn Gly Gly Arg Ser Arg Ala Tyr Met Pro Pro Arg Ser
 515 520 525
 Arg Ser Arg Asp Asp Leu Tyr Asp Gln Asp Asp Ser Arg Asp Phe Pro
 530 535 540
 Arg Ser Arg Asp Pro His Tyr Asp Asp Phe Arg Ser Arg Glu Arg Pro
 545 550 555 560
 Pro Ala Asp Pro Arg Ser His His His Arg Thr Arg Asp Pro Arg Asp
 565 570 575
 Asn Gly Ser Arg Ser Gly Asp Leu Pro Tyr Asp Gly Arg Leu Leu Glu
 580 585 590
 Glu Ala Val Arg Lys Lys Gly Ser Glu Glu Arg Arg Arg Pro His Lys
 595 600 605
 Glu Glu Glu Glu Ala Tyr Tyr Pro Pro Ala Pro Pro Pro Tyr Ser
 610 615 620
 Glu Thr Asp Ser Gln Ala Ser Arg Glu Arg Arg Leu Lys Lys Asn Leu
 625 630 635 640
 Ala Leu Ser Arg Glu Ser Leu Val Val
 645

<210> 4
 <211> 2101
 <212> DNA
 <213> Homo sapiens

<220>
 <221> allele
 <222> 595
 <223> 9-3-324 : polymorphic base C or T

<220>
 <221> allele
 <222> 883
 <223> 9-6-187 : polymorphic base C or T

<220>
 <221> allele
 <222> 1134

<223> 9-7-325 : polymorphic base A or G

<220>
<221> allele
<222> 1305
<223> 9-9-246 : polymorphic base G or C

<220>
<221> allele
<222> 1601
<223> LSRX9f13-BM : polymorphic base deletion of AGG

<220>
<221> allele
<222> 2022
<223> LSRX9f14-BM : polymorphic base T or G

<400> 4

tggagtgtgg	ctcggaggac	cgcggcggtt	caagcacctt	tctcccccatt	atctgaaagc	60
atgccctttg	tccacgtcgt	ttacgctcat	taaaaacttcc	aga atg caa cag gac		115
				Met Gln Gln Asp		
				1		
gga ctt gga gta ggg aca agg aac gga agt ggg aag ggg agg agc gtg						163
Gly Leu Gly Val Gly Thr Arg Asn Gly Ser Gly Lys Gly Arg Ser Val						
5	10	15	20			
cac ccc tcc tgg cct tgg tgc gcg ccg cgc ccc cta agg tac ttt gga						211
His Pro Ser Trp Pro Trp Cys Ala Pro Arg Pro Leu Arg Tyr Phe Gly						
25	30	35				
agg gac gcg cgg gcc aga cgc gcc cag acg gcc gcg atg gcg ctg ttg						259
Arg Asp Ala Arg Ala Arg Arg Ala Gln Thr Ala Ala Met Ala Leu Leu						
40	45	50				
gcc ggc ggg ctc tcc aga ggg ctg ggc tcc cac ccg gcc gca ggc						307
Ala Gly Gly Leu Ser Arg Gly Leu Gly Ser His Pro Ala Ala Gly						
55	60	65				
cgg gac gcg gtc gtc ttc gtg tgg ctt ctg ctt agc acc tgg tgc aca						355
Arg Asp Ala Val Val Phe Val Trp Leu Leu Ser Thr Trp Cys Thr						
70	75	80				
gct cct gcc agg gcc atc cag gtg acc gtg tcc aac ccc tac cac gtg						403
Ala Pro Ala Arg Ala Ile Gln Val Thr Val Ser Asn Pro Tyr His Val						
85	90	95	100			
gtg atc ctc ttc cag cct gtg acc ctg ccc tgt acc tac cag atg acc						451
Val Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr Tyr Gln Met Thr						
105	110	115				
tcg acc ccc acgcaa ccc atc gtc atc tgg aag tac aag tct ttc tgc						499
Ser Thr Pro Thr Gln Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys						
120	125	130				
cgg gac cgc atc gcc gat gcc ttc tcc ccg gcc agc gtc gac aac cag						547
Arg Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln						
135	140	145				
ctc aat gcc cag ctg gca gcc ggg aac cca ggc tac aac ccc tac gty						595
Leu Asn Ala Gln Leu Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val						
150	155	160				
gag tgc cag gac agc gtg cgc acc gtc agg gtc gtg gcc acc aag cag						643
Glu Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln						
165	170	175	180			
ggc aac gct gtg acc ctg gga gat tac tac cag ggc cg agg att acc						691
Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr						
185	190	195				
atc acc gga aat gct gac ctg acc ttt gac cag acg gcg tgg ggg gac						739
Ile Thr Gly Asn Ala Asp Leu Thr Phe Asp Gln Thr Ala Trp Gly Asp						
200	205	210				
agt ggt gtg tat tac tgc tcc gtg gtc tca gcc cag gac ctc cag ggg						787
Ser Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Gln Gly						

215	220	225	
aac aat gag gcc tac gca gag ctc atc gtc ctt gac tgg ctc ttc gtg			835
Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Asp Trp Leu Phe Val			
230	235	240	
gtt gtg gta tgc ctg gct gcc ttc ctc atc ttc ctc ctc ctg ggc aty			883
Val Val Val Cys Leu Ala Ala Phe Leu Ile Phe Leu Leu Leu Gly Ile			
245	250	255	260
tgc tgg tgc cag tgc tgc ccg cac act tgc tgc tac gtc agg tgc			931
Cys Trp Cys Gln Cys Cys Pro His Thr Cys Cys Cys Tyr Val Arg Cys			
265	270	275	
ccc tgc tgc cca gac aag tgc tgc ccc gag gcc ctg tat gcc gcc			979
Pro Cys Cys Pro Asp Lys Cys Cys Pro Glu Ala Leu Tyr Ala Ala			
280	285	290	
ggc aaa gca gcc acc tca ggt gtt ccc agc att tat gcc ccc agc acc			1027
Gly Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Thr			
295	300	305	
tat gcc cac ctg tct ccc gcc aag acc cca ccc cca gct atg att			1075
Tyr Ala His Leu Ser Pro Ala Lys Thr Pro Pro Pro Ala Met Ile			
310	315	320	
ccc atg ggc cct gcc tac aac ggg tac cct gga gga tac cct gga gac			1123
Pro Met Gly Pro Ala Tyr Asn Gly Tyr Pro Gly Gly Tyr Pro Gly Asp			
325	330	335	340
gtt gac agg art agc tca gct ggt ggc caa ggc tcc tat gta ccc ctg			1171
Val Asp Arg Xaa Ser Ser Ala Gly Gly Gln Gly Ser Tyr Val Pro Leu			
345	350	355	
ctt cgg gac acg gac agc agt gtg gcc tct gaa gtc cgc agt ggc tac			1219
Leu Arg Asp Thr Asp Ser Ser Val Ala Ser Glu Val Arg Ser Gly Tyr			
360	365	370	
agg att cag gcc agc cag cag gac tcc atg cgg gtc ctg tac tac			1267
Arg Ile Gln Ala Ser Gln Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr			
375	380	385	
atg gag aag gag ctg gcc aac ttc gac cct tct cga cst ggc ccc ccc			1315
Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Xaa Gly Pro Pro			
390	395	400	
agt ggc cgt gtg gag cgg gcc atg agt gaa gtc acc tcc ctc cac gag			1363
Ser Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser Leu His Glu			
405	410	415	420
gac gac tgg cga tct cgg cct tcc cgg ggc cct gcc ctc acc ccg atc			1411
Asp Asp Trp Arg Ser Arg Pro Ser Arg Gly Pro Ala Leu Thr Pro Ile			
425	430	435	
cgg gat gag gag tgg ggt ggc cac tcc ccc cgg agt ccc agg gga tgg			1459
Arg Asp Glu Glu Trp Gly Gly His Ser Pro Arg Ser Pro Arg Gly Trp			
440	445	450	
gac cag gag ccc gcc agg gag cag gca ggc ggg ggc tgg cgg gcc agg			1507
Asp Gln Glu Pro Ala Arg Glu Gln Ala Gly Gly Trp Arg Ala Arg			
455	460	465	
cgg ccc cgg gcc cgc tcc gtg gac gcc ctg gac gac ctc acc ccg ccg			1555
Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Leu Thr Pro Pro			
470	475	480	
agc acc gcc gag tca ggg agc agg tct ccc acg agt aat ggt ggg aga			1603
Ser Thr Ala Glu Ser Gly Ser Arg Ser Pro Thr Ser Asn Gly Gly Arg			
485	490	495	500
agc cgg gcc tac atg ccc ccg cgg agc cgc agc cgg gac gac ctc tat			1651
Ser Arg Ala Tyr Met Pro Pro Arg Ser Arg Ser Arg Asp Asp Leu Tyr			
505	510	515	
gac caa gac gac tcg agg gac ttc cca cgc tcc cgg gac ccc cac tac			1699
Asp Gln Asp Asp Ser Arg Asp Phe Pro Arg Ser Arg Asp Pro His Tyr			
520	525	530	
gac gac ttc agg tct cgg gag cgc cct cct gcc gac ccc agg tcc cac			1747
Asp Asp Phe Arg Ser Arg Glu Arg Pro Pro Ala Asp Pro Arg Ser His			
535	540	545	
cac cac cgt acc cgg gac cct cgg gac aac ggc tcc agg tcc ggg gac			1795
His His Arg Thr Arg Asp Pro Arg Asp Asn Gly Ser Arg Ser Gly Asp			

550	555	560	
ctc ccc tat gat ggg cg	cta ctg gag gag gct gtg agg aag aag ggg		1843
Leu Pro Tyr Asp Gly Arg Leu Leu Glu Glu Ala Val Arg Lys Lys Gly			
565	570	575	580
tcg gag gag agg agg aga ccc cac aag gag gag gag gaa gag gcc tac			1891
Ser Glu Glu Arg Arg Arg Pro His Lys Glu Glu Glu Glu Ala Tyr			
585	590	595	
tac ccg ccc gcg ccg ccc ccg tac tcg gag acc gac tcg cag gcg tcc			1939
Tyr Pro Pro Ala Pro Pro Tyr Ser Glu Thr Asp Ser Gln Ala Ser			
600	605	610	
cga gag cgc agg ctc aag aag aac ttg gcc ctg agt cgg gaa agt tta			1987
Arg Glu Arg Arg Leu Lys Lys Asn Leu Ala Leu Ser Arg Glu Ser Leu			
615	620	625	
gtc gtc tga tctgacgtt tctacgtac ttttgkattt ttttttttaa			2036
Val Val *			
630			
tttgaaggaa cactgatgaa gccctgccat acccccctcccg agtctaataa aacgtataat			2096
cacaa			2101

<210> 5
 <211> 630
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> 344
 <223> 9-7-325 : polymorphic amino acid Ser or Asn

<220>
 <221> VARIANT
 <222> 401
 <223> 9-9-246 : polymorphic amino acid Pro or Arg

<220>
 <221> VARIANT
 <222> 500
 <223> LSRX9f13-BM : polymorphic amino acid deletion of Arg

<400> 5
 Met Gln Gln Asp Gly Leu Gly Val Gly Thr Arg Asn Gly Ser Gly Lys
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 Gly Arg Ser Val His Pro Ser Trp Pro Trp Cys Ala Pro Arg Pro Leu
 20 25 30
 Arg Tyr Phe Gly Arg Asp Ala Arg Ala Arg Arg Ala Gln Thr Ala Ala
 35 40 45
 Met Ala Leu Leu Ala Gly Gly Leu Ser Arg Gly Leu Gly Ser His Pro
 50 55 60
 Ala Ala Ala Gly Arg Asp Ala Val Val Phe Val Trp Leu Leu Ser
 65 70 75 80
 Thr Trp Cys Thr Ala Pro Ala Arg Ala Ile Gln Val Thr Val Ser Asn
 85 90 95
 Pro Tyr His Val Val Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr
 100 105 110
 Tyr Gln Met Thr Ser Thr Pro Thr Gln Pro Ile Val Ile Trp Lys Tyr
 115 120 125
 Lys Ser Phe Cys Arg Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser
 130 135 140
 Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr
 145 150 155 160
 Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg Thr Val Arg Val Val
 165 170 175
 Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly

180	185	190
Arg Arg Ile Thr Ile Thr Gly Asn Ala Asp Leu Thr Phe Asp Gln Thr		
195	200	205
Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln		
210	215	220
Asp Leu Gln Gly Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Asp		
225	230	235
Trp Leu Phe Val Val Val Cys Leu Ala Ala Phe Leu Ile Phe Leu		
240	245	250
Leu Leu Gly Ile Cys Trp Cys Gln Cys Cys Pro His Thr Cys Cys Cys		
255	260	265
Tyr Val Arg Cys Pro Cys Cys Pro Asp Lys Cys Cys Cys Pro Glu Ala		
270	275	280
Leu Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr		
285	290	295
Ala Pro Ser Thr Tyr Ala His Leu Ser Pro Ala Lys Thr Pro Pro Pro		
300	305	310
Pro Ala Met Ile Pro Met Gly Pro Ala Tyr Asn Gly Tyr Pro Gly Gly		
315	320	325
Tyr Pro Gly Asp Val Asp Arg Ser Ser Ala Gly Gly Gln Gly Ser		
330	340	345
Tyr Val Pro Leu Leu Arg Asp Thr Asp Ser Ser Val Ala Ser Glu Val		
335	355	360
Arg Ser Gly Tyr Arg Ile Gln Ala Ser Gln Gln Asp Asp Ser Met Arg		
340	370	375
Val Leu Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg		
345	385	390
Pro Gly Pro Pro Ser Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr		
350	405	410
Ser Leu His Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg Gly Pro Ala		
355	420	425
Leu Thr Pro Ile Arg Asp Glu Glu Trp Gly Gly His Ser Pro Arg Ser		
360	435	440
Pro Arg Gly Trp Asp Gln Glu Pro Ala Arg Glu Gln Ala Gly Gly		
365	450	455
Trp Arg Ala Arg Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp		
370	465	470
Leu Thr Pro Pro Ser Thr Ala Glu Ser Gly Ser Arg Ser Pro Thr Ser		
375	485	490
Asn Gly Gly Arg Ser Arg Ala Tyr Met Pro Pro Arg Ser Arg Ser Arg		
380	500	505
Asp Asp Leu Tyr Asp Gln Asp Asp Ser Arg Asp Phe Pro Arg Ser Arg		
385	515	520
Asp Pro His Tyr Asp Asp Phe Arg Ser Arg Glu Arg Pro Pro Ala Asp		
390	530	535
Pro Arg Ser His His His Arg Thr Arg Asp Pro Arg Asp Asn Gly Ser		
395	545	550
Arg Ser Gly Asp Leu Pro Tyr Asp Gly Arg Leu Leu Glu Glu Ala Val		
400	565	570
Arg Lys Lys Gly Ser Glu Glu Arg Arg Pro His Lys Glu Glu Glu		
405	580	585
Glu Glu Ala Tyr Tyr Pro Pro Ala Pro Pro Pro Tyr Ser Glu Thr Asp		
410	595	600
Ser Gln Ala Ser Arg Glu Arg Arg Leu Lys Lys Asn Leu Ala Leu Ser		
415	610	615
Arg Glu Ser Leu Val Val		
420	625	630

<210> 6

<211> 1954

<212> DNA

<213> Homo sapiens

<220>
<221> allele
<222> 595
<223> 9-3-324 : polymorphic base C or T

<220>
<221> allele
<222> 987
<223> 9-7-325 : polymorphic base A or G

<220>
<221> allele
<222> 1158
<223> 9-9-246 : polymorphic base G or C

<220>
<221> allele
<222> 1454
<223> LSRX9f13-BM : polymorphic base deletion of AGG

<220>
<221> allele
<222> 1875
<223> LSRX9f14-BM : polymorphic base T or G

<400> 6
tggagtgtgg ctcggaggac cgccggcggtt caagcacott tctccccat atctgaaagc 60
atgccttttgc tccacgtcgt ttacgctcat taaaacttcc aga atg caa cag gac 115
Met Gln Gln Asp
1
gga ctt gga gta ggg aca agg aac gga agt ggg aag ggg agg agc gtg 163
Gly Leu Gly Val Gly Thr Arg Asn Gly Ser Gly Lys Gly Arg Ser Val
5 10 15 20
cac ccc tcc tgg cct tgg tgc gcg ccg cgc ccc cta agg tac ttt gga 211
His Pro Ser Trp Pro Trp Cys Ala Pro Arg Pro Leu Arg Tyr Phe Gly
25 30 35
agg gac gcg cgg gcc aga cgc gcc cag acg gcc gcg atg gcg ctg ttg 259
Arg Asp Ala Arg Ala Arg Arg Ala Gln Thr Ala Ala Met Ala Leu Leu
40 45 50
gcc ggc ggg ctc tcc aga ggg ctg ggc tcc cac ccg gcc gca ggc 307
Ala Gly Gly Leu Ser Arg Gly Leu Gly Ser His Pro Ala Ala Ala Gly
55 60 65
cg gac gcg gtc gtc ttc gtg tgg ctt ctg ctt agc acc tgg tgc aca 355
Arg Asp Ala Val Val Phe Val Trp Leu Leu Ser Thr Trp Cys Thr
70 75 80
gct cct gcc agg gcc atc cag gtg acc gtg tcc aac ccc tac cac gtg 403
Ala Pro Ala Arg Ala Ile Gln Val Thr Val Ser Asn Pro Tyr His Val
85 90 95 100
gtg atc ctc ttc cag cct gtg acc ctg ccc tgt acc tac cag atg acc 451
Val Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr Tyr Gln Met Thr
105 110 115
tcg acc ccc acg caa ccc atc gtc atc tgg aag tac aag tct ttc tgc 499
Ser Thr Pro Thr Gln Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys
120 125 130
cg gac gcg atc gcc gat gcc ttc tcc ccg gcc agc gtc gac aac cag 547
Arg Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln
135 140 145
ctc aat gcc cag ctg gca gcc ggg aac cca ggc tac aac ccc tac gty 595
Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val
150 155 160
gag tgc cag gac agc gtg cgc acc gtc agg gtc gtg gcc acc aag cag 643
Glu Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln
165 170 175 180

ggc aac gct gtg acc ctg gga gat tac tac cag ggc cg	agg att acc	691
Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr		
185 190 195		
atc acc gga aat gct gac ctg acc ttt gac cag acg gcg tgg ggg gac		739
Ile Thr Gly Asn Ala Asp Leu Thr Phe Asp Gln Thr Ala Trp Gly Asp		
200 205 210		
agt ggt gtg tat tac tgc tcc gtg gtc tca gcc cag gac ctc cag ggg		787
Ser Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Gln Gly		
215 220 225		
aac aat gag gcc tac gca gag ctc atc gtc ctt gtg tat gcc gcc ggc		835
Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Val Tyr Ala Ala Gly		
230 235 240		
aaa gca gcc acc tca ggt gtt ccc agc att tat gcc ccc agc acc tat		883
Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Thr Tyr		
245 250 255 260		
gcc cac ctg tct ccc gcc aag acc cca ccc cca cca gct atg att ccc		931
Ala His Leu Ser Pro Ala Lys Thr Pro Pro Pro Ala Met Ile Pro		
265 270 275		
atg ggc cct gcc tac aac ggg tac cct gga gga tac cct gga gac gtt		979
Met Gly Pro Ala Tyr Asn Gly Tyr Pro Gly Gly Tyr Pro Gly Asp Val		
280 285 290		
gac agg art agc tca gct ggt ggc caa ggc tcc tat gta ccc ctg ctt		1027
Asp Arg Xaa Ser Ser Ala Gly Gly Gln Gly Ser Tyr Val Pro Leu Leu		
295 300 305		
cg gac acg gac agc agt gtg gcc tct gaa gtc cgc agt ggc tac agg		1075
Arg Asp Thr Asp Ser Ser Val Ala Ser Glu Val Arg Ser Gly Tyr Arg		
310 315 320		
att cag gcc agc cag cag gac tcc atg cgg gtc ctg tac tac atg		1123
Ile Gln Ala Ser Gln Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr Met		
325 330 335 340		
gag aag gag ctg gcc aac ttc gac cct tct cga cst ggc ccc ccc agt		1171
Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Xaa Gly Pro Pro Ser		
345 350 355		
ggc cgt gtg gag cgg gcc atg agt gaa gtc acc tcc ctc cac gag gac		1219
Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser Leu His Glu Asp		
360 365 370		
gac tgg cga tct cgg cct tcc cgg ggc cct gcc ctc acc ccg atc cgg		1267
Asp Trp Arg Ser Arg Pro Ser Arg Gly Pro Ala Leu Thr Pro Ile Arg		
375 380 385		
gat gag gag tgg ggt ggc cac tcc ccc cgg agt ccc agg gga tgg gac		1315
Asp Glu Glu Trp Gly Gly His Ser Pro Arg Ser Pro Arg Gly Trp Asp		
390 395 400		
cag gag ccc gcc agg gag cag gca ggc ggg ggc tgg cgg gcc agg cgg		1363
Gln Glu Pro Ala Arg Glu Gln Ala Gly Gly Trp Arg Ala Arg Arg		
405 410 415 420		
ccc cgg gcc cgc tcc gtg gac gcc ctg gac gac ctc acc ccg ccg agc		1411
Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Leu Thr Pro Pro Ser		
425 430 435		
acc gcc gag tca ggg agc agg tct ccc acg agt aat ggt ggg aga agc		1459
Thr Ala Glu Ser Gly Ser Arg Ser Pro Thr Ser Asn Gly Arg Ser		
440 445 450		
cgg gcc tac atg ccc ccg cgg agc cgc agc cgg gac gac ctc tat gac		1507
Arg Ala Tyr Met Pro Pro Arg Ser Arg Ser Arg Asp Asp Leu Tyr Asp		
455 460 465		
caa gac gac tcg agg gac ttc cca cgc tcc cgg gac ccc cac tac gac		1555
Gln Asp Asp Ser Arg Asp Phe Pro Arg Ser Arg Asp Pro His Tyr Asp		
470 475 480		
gac ttc agg tct cgg gag cgc cct cct gcc gac ccc agg tcc cac cac		1603
Asp Phe Arg Ser Arg Glu Arg Pro Pro Ala Asp Pro Arg Ser His His		
485 490 495 500		
cac cgt acc cgg gac cct cgg gac aac ggc tcc agg tcc ggg gac ctc		1651
His Arg Thr Arg Asp Pro Arg Asp Asn Gly Ser Arg Ser Gly Asp Leu		
505 510 515		

ccc tat gat ggg cg ^g cta ctg gag gag gct gtg agg aag aag ggg tcg Pro Tyr Asp Gly Arg Leu Leu Glu Glu Ala Val Arg Lys Lys Gly Ser	1699
520 525 530	
gag gag agg aga ccc cac aag gag gag gag gaa gag gcc tac tac Glu Glu Arg Arg Pro His Lys Glu Glu Glu Glu Ala Tyr Tyr	1747
535 540 545	
ccg ccc gc ^g ccg ccc ccg tac tcg gag acc gac tcg cag gc ^g tcc cga Pro Pro Ala Pro Pro Tyr Ser Glu Thr Asp Ser Gln Ala Ser Arg	1795
550 555 560	
gag cgc agg ctc aag aac ttg gcc ctg agt cg ^g gaa agt tta gtc Glu Arg Arg Leu Lys Lys Asn Leu Ala Leu Ser Arg Glu Ser Leu Val	1843
565 570 575 580	
gtc tga tctgacgttt tctacgttagc ttttgkattt tttttttaa tttgaaggaa Val *	1899
cactgatgaa gccctgccat acccctcccg agtctaataa aacgtataat caca ^a	1954

<210> 7
<211> 581
<212> PRT
<213> Homo sapiens

<220>
<221> VARIANT
<222> 295
<223> 9-7-325 : polymorphic amino acid Ser or Asn

<220>
<221> VARIANT
<222> 352
<223> 9-9-246 : polymorphic amino acid Pro or Arg

<220>
<221> VARIANT
<222> 451
<223> LSRX9f13-BM : polymorphic amino acid deletion of Arg

<400> 7
Met Gln Gln Asp Gly Leu Gly Val Gly Thr Arg Asn Gly Ser Gly Lys
1 5 10 15
Gly Arg Ser Val His Pro Ser Trp Pro Trp Cys Ala Pro Arg Pro Leu
20 25 30
Arg Tyr Phe Gly Arg Asp Ala Arg Ala Arg Arg Ala Gln Thr Ala Ala
35 40 45
Met Ala Leu Leu Ala Gly Gly Leu Ser Arg Gly Leu Gly Ser His Pro
50 55 60
Ala Ala Ala Gly Arg Asp Ala Val Val Phe Val Trp Leu Leu Leu Ser
65 70 75 80
Thr Trp Cys Thr Ala Pro Ala Arg Ala Ile Gln Val Thr Val Ser Asn
85 90 95
Pro Tyr His Val Val Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr
100 105 110
Tyr Gln Met Thr Ser Thr Pro Thr Gln Pro Ile Val Ile Trp Lys Tyr
115 120 125
Lys Ser Phe Cys Arg Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser
130 135 140
Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr
145 150 155 160
Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg Thr Val Arg Val Val
165 170 175
Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly
180 185 190
Arg Arg Ile Thr Ile Thr Gly Asn Ala Asp Leu Thr Phe Asp Gln Thr
195 200 205

Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln
 210 215 220
 Asp Leu Gln Gly Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Val
 225 230 235 240
 Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala
 245 250 255
 Pro Ser Thr Tyr Ala His Leu Ser Pro Ala Lys Thr Pro Pro Pro
 260 265 270
 Ala Met Ile Pro Met Gly Pro Ala Tyr Asn Gly Tyr Pro Gly Gly Tyr
 275 280 285
 Pro Gly Asp Val Asp Arg Ser Ser Ala Gly Gly Gln Gly Ser Tyr
 290 295 300
 Val Pro Leu Leu Arg Asp Thr Asp Ser Ser Val Ala Ser Glu Val Arg
 305 310 315 320
 Ser Gly Tyr Arg Ile Gln Ala Ser Gln Gln Asp Asp Ser Met Arg Val
 325 330 335
 Leu Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Pro
 340 345 350
 Gly Pro Pro Ser Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser
 355 360 365
 Leu His Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg Gly Pro Ala Leu
 370 375 380
 Thr Pro Ile Arg Asp Glu Glu Trp Gly Gly His Ser Pro Arg Ser Pro
 385 390 395 400
 Arg Gly Trp Asp Gln Glu Pro Ala Arg Glu Gln Ala Gly Gly Trp
 405 410 415
 Arg Ala Arg Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Leu
 420 425 430
 Thr Pro Pro Ser Thr Ala Glu Ser Gly Ser Arg Ser Pro Thr Ser Asn
 435 440 445
 Gly Gly Arg Ser Arg Ala Tyr Met Pro Pro Arg Ser Arg Ser Arg Asp
 450 455 460
 Asp Leu Tyr Asp Gln Asp Asp Ser Arg Asp Phe Pro Arg Ser Arg Asp
 465 470 475 480
 Pro His Tyr Asp Asp Phe Arg Ser Arg Glu Arg Pro Pro Ala Asp Pro
 485 490 495
 Arg Ser His His His Arg Thr Arg Asp Pro Arg Asp Asn Gly Ser Arg
 500 505 510
 Ser Gly Asp Leu Pro Tyr Asp Gly Arg Leu Leu Glu Glu Ala Val Arg
 515 520 525
 Lys Lys Gly Ser Glu Glu Arg Arg Arg Pro His Lys Glu Glu Glu Glu
 530 535 540
 Glu Ala Tyr Tyr Pro Pro Ala Pro Pro Pro Tyr Ser Glu Thr Asp Ser
 545 550 555 560
 Gln Ala Ser Arg Glu Arg Arg Leu Lys Lys Asn Leu Ala Leu Ser Arg
 565 570 575
 Glu Ser Leu Val Val
 580

<210> 8
 <211> 2097
 <212> DNA
 <213> Rattus norvegicus

<400> 8
 accgctcacc aggtcagttg tccccggaaa gccgaaggca tgagcttcgc ccaagtctt 60
 tttatgggtt agaactcctc cagagcgccc gaaaaaggac ttggaatagg ggcgggacgg 120
 agcacgcacc cttctccgccc ttggttctcg ccgcgcgggg tactctcgaa atacttggga 180
 ggggacgcgc gggcaccgtc gctgtagac ggccgcg atg gcg ccg gcg gcc ggc 235
 Met Ala Pro Ala Ala Gly
 1 5
 gcg tgt gct ggg gcg cct gac tcc cac cca gct acc gtg gtc ttc gtg 283
 Ala Cys Ala Gly Ala Pro Asp Ser His Pro Ala Thr Val Val Phe Val

	10	15	20	
tgt ctc ttt ctc atc att ttc tgc cca gac cct gcc agt gcc atc cag Cys Leu Phe Leu Ile Ile Phe Cys Pro Asp Pro Ala Ser Ala Ile Gln	25	30	35	331
gtg act gtg tct gac ccc tac cac gta gtg atc ctg ttc cag cca gtg Val Thr Val Ser Asp Pro Tyr His Val Val Ile Leu Phe Gln Pro Val	40	45	50	379
acc ctg ccc tgc acc tat cag atg agc aac act ctc aca gtc ccc atc Thr Leu Pro Cys Thr Tyr Gln Met Ser Asn Thr Leu Thr Val Pro Ile	55	60	65	427
gtg atc tgg aag tac aag tca ttc tgc cgg gac cgt att gcc gat gcc Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg Asp Arg Ile Ala Asp Ala	75	80	85	475
ttc tct cct gcc agt gtg gac aac cag cta aat gcc cag ttg gca gct Phe Ser Pro Ala Ser Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala	90	95	100	523
ggc aac ccc ggc tac aac ccc tat gtg gag tgc cag gac agt gta cgc Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg	105	110	115	571
act gtc agg gtg gtg gcc acc aaa cag ggc aat gcg gtg acc ctg gga Thr Val Arg Val Val Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly	120	125	130	619
gac tac tac caa ggc agg agg atc acc ata aca aat gct gac ctg Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile Thr Gly Asn Ala Asp Leu	135	140	145	667
acc ttc gag cag aca gcc tgg gga gac agt gga gtg tat tac tgc tct Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser	155	160	165	715
gtg gtc tcg gcc caa gat ctg gat gga aac gag gcg tac gca gag Val Val Ser Ala Gln Asp Leu Asp Gly Asn Asn Glu Ala Tyr Ala Glu	170	175	180	763
ctc atc gtc ctt ggc agg acc tca gag gcc cct gag ctc cta cct ggt Leu Ile Val Leu Gly Arg Thr Ser Glu Ala Pro Glu Leu Leu Pro Gly	185	190	195	811
ttt cgg gcg ggg ccc ttg gaa gat tgg ctc ttt gtg gtc gtg gtc tgc Phe Arg Ala Gly Pro Leu Glu Asp Trp Leu Phe Val Val Val Val Cys	200	205	210	859
ctg gcg agc ctc ctc ttc ctc ctc ctg ggc atc tgc tgg tgc cag Leu Ala Ser Leu Leu Leu Phe Leu Leu Leu Gly Ile Cys Trp Cys Gln	215	220	225	907
tgc tgt cct cac acc tgc tgc tat gtc cga tgt ccc tgc tgc cca Cys Cys Pro His Thr Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro	235	240	245	955
gac aag tgc tgt tgc cct gag gct ctt tat gct gct ggc aaa gca gcc Asp Lys Cys Cys Pro Glu Ala Leu Tyr Ala Ala Gly Lys Ala Ala	250	255	260	1003
acc tca ggt gtc ccg agc atc tat gcc ccc agc atc tat acc cac ctc Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Ile Tyr Thr His Leu	265	270	275	1051
tca cct gcc aag acc cca cca cct ccg cct gcc atg att ccc atg ggc Ser Pro Ala Lys Thr Pro Pro Pro Pro Ala Met Ile Pro Met Gly	280	285	290	1099
cct ccc tat ggg tac cct gga gac ttt gac aga cat agc tca gtt ggt Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp Arg His Ser Ser Val Gly	295	300	305	1147
ggc cac agc tcc caa gta ccc ctg ctg cgt gac gtg gat ggc agt gta Gly His Ser Ser Gln Val Pro Leu Leu Arg Asp Val Asp Gly Ser Val	315	320	325	1195
tct tca gaa gta cga agt ggc tac agg atc cag gct aac cag caa gat Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile Gln Ala Asn Gln Gln Asp	330	335	340	1243
gac tcc atg agg gtc cta tac tat atg gag aaa gag cta gcc aac ttt Asp Ser Met Arg Val Leu Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe				1291

345	350	355	
gac cct tcc cga cct ggc cct ccc aat ggc aga gtg gaa cg	gg ccc atg Asp Pro Ser Arg Pro Gly Pro Pro Asn Gly Arg Val Glu Arg Ala Met		1339
360	365	370	
agt gaa gta acc tcc ctc cat gaa gat gac tgg cga tcg agg cct tcc	Ser Glu Val Thr Ser Leu His Glu Asp Asp Trp Arg Ser Arg Pro Ser		1387
375	380	385	390
agg gct cct gcc ctc acc ccc atc agg gat gag gag tgg aat cgc cac	Arg Ala Pro Ala Leu Thr Pro Ile Arg Asp Glu Glu Trp Asn Arg His		1435
395	400		405
tcc cca cag agt ccc aga aca tgg gag cag gaa ccc ctt caa gaa caa	Ser Pro Gln Ser Pro Arg Thr Trp Glu Gln Glu Pro Leu Gln Glu Gln		1483
410	415		420
cca agg ggt ggt tgg ggg tct gga cgc cct cgg gcc cgc tct gtg gat	Pro Arg Gly Gly Trp Gly Ser Gly Arg Pro Arg Ala Arg Ser Val Asp		1531
425	430		435
gct cta gat gat atc aac cgg cct ggc tcc act gaa tca gga cgg tct	Ala Leu Asp Asp Ile Asn Arg Pro Gly Ser Thr Glu Ser Gly Arg Ser		1579
440	445		450
tct ccc cca agt agt gga cgg aga gga cgg gcc tat gca cct cca aga	Ser Pro Pro Ser Ser Gly Arg Arg Gly Arg Ala Tyr Ala Pro Pro Arg		1627
455	460		465
agt cgc agc cgg gat gac ctc tat gac ccg gac gat cct agg gac ttg	Ser Arg Ser Arg Asp Asp Leu Tyr Asp Pro Asp Asp Pro Arg Asp Leu		1675
475	480		485
cca cat tcc cga gat ccc cac tat tat gac gac atc agg tct aga gat	Pro His Ser Arg Asp Pro His Tyr Tyr Asp Asp Ile Arg Ser Arg Asp		1723
490	495		500
cca cgt gct gac ccc aga tcc cgt cag cga tcc cga gat cct cgg gat	Pro Arg Ala Asp Pro Arg Ser Arg Gln Arg Ser Arg Asp Pro Arg Asp		1771
505	510		515
gct ggc ttc agg tca agg gac cct cag tat gat ggg cga cta tta gaa	Ala Gly Phe Arg Ser Arg Asp Pro Gln Tyr Asp Gly Arg Leu Leu Glu		1819
520	525		530
gag gct tta aag aaa aag ggg tcg ggc gag aga agg agg gtt tac agg	Glu Ala Leu Lys Lys Gly Ser Gly Glu Arg Arg Arg Val Tyr Arg		1867
535	540		545
gag gaa gaa gag gaa gag gag ggc caa tac ccc cca gca cct cca cct	Glu Glu Glu Glu Glu Gly Gln Tyr Pro Pro Ala Pro Pro Pro		1915
555	560		565
tac tca gag act gac tcg cag gcc tca cgg gag agg agg ctg aaa aag	Tyr Ser Glu Thr Asp Ser Gln Ala Ser Arg Glu Arg Arg Leu Lys Lys		1963
570	575		580
aat ttg gcc ctg agt cgg gaa agt tta gtc gtc tga tccacgtttt	Asn Leu Ala Leu Ser Arg Glu Ser Leu Val Val *		2009
585	590		
gtatgttagct ttgtacttt ttttaatt ggaatcaata ttgatgaaac ttcaagccta	ataaaatgtc taatcacaaa aaaaaaaaa		2069
			2097

<210> 9
 <211> 593
 <212> PRT
 <213> Rattus norvegicus

<400> 9
 Met Ala Pro Ala Ala Gly Ala Cys Ala Gly Ala Pro Asp Ser His Pro
 1 5 10 15
 Ala Thr Val Val Phe Val Cys Leu Phe Leu Ile Ile Phe Cys Pro Asp
 20 25 30
 Pro Ala Ser Ala Ile Gln Val Thr Val Ser Asp Pro Tyr His Val Val
 35 40 45
 Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr Tyr Gln Met Ser Asn
 50 55 60

Thr Leu Thr Val Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg
 65 70 75 80
 Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln Leu
 85 90 95
 Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu
 100 105 110
 Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln Gly
 115 120 125
 Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile
 130 135 140
 Thr Gly Asn Ala Asp Leu Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser
 145 150 155 160
 Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Asp Gly Asn
 165 170 175
 Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Gly Arg Thr Ser Glu Ala
 180 185 190
 Pro Glu Leu Leu Pro Gly Phe Arg Ala Gly Pro Leu Glu Asp Trp Leu
 195 200 205
 Phe Val Val Val Val Cys Leu Ala Ser Leu Leu Phe Leu Leu Leu
 210 215 220
 Gly Ile Cys Trp Cys Gln Cys Cys Pro His Thr Cys Cys Cys Tyr Val
 225 230 235 240
 Arg Cys Pro Cys Cys Pro Asp Lys Cys Cys Pro Glu Ala Leu Tyr
 245 250 255
 Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro
 260 265 270
 Ser Ile Tyr Thr His Leu Ser Pro Ala Lys Thr Pro Pro Pro Pro Pro
 275 280 285
 Ala Met Ile Pro Met Gly Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp
 290 295 300
 Arg His Ser Ser Val Gly Gly His Ser Ser Gln Val Pro Leu Leu Arg
 305 310 315 320
 Asp Val Asp Gly Ser Val Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile
 325 330 335
 Gln Ala Asn Gln Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr Met Glu
 340 345 350
 Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Pro Gly Pro Pro Asn Gly
 355 360 365
 Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser Leu His Glu Asp Asp
 370 375 380
 Trp Arg Ser Arg Pro Ser Arg Ala Pro Ala Leu Thr Pro Ile Arg Asp
 385 390 395 400
 Glu Glu Trp Asn Arg His Ser Pro Gln Ser Pro Arg Thr Trp Glu Gln
 405 410 415
 Glu Pro Leu Gln Glu Gln Pro Arg Gly Gly Trp Gly Ser Gly Arg Pro
 420 425 430
 Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Ile Asn Arg Pro Gly Ser
 435 440 445
 Thr Glu Ser Gly Arg Ser Ser Pro Pro Ser Ser Gly Arg Arg Gly Arg
 450 455 460
 Ala Tyr Ala Pro Pro Arg Ser Arg Ser Arg Asp Asp Leu Tyr Asp Pro
 465 470 475 480
 Asp Asp Pro Arg Asp Leu Pro His Ser Arg Asp Pro His Tyr Tyr Asp
 485 490 495
 Asp Ile Arg Ser Arg Asp Pro Arg Ala Asp Pro Arg Ser Arg Gln Arg
 500 505 510
 Ser Arg Asp Pro Arg Asp Ala Gly Phe Arg Ser Arg Asp Pro Gln Tyr
 515 520 525
 Asp Gly Arg Leu Leu Glu Glu Ala Leu Lys Lys Lys Gly Ser Gly Glu
 530 535 540
 Arg Arg Arg Val Tyr Arg Glu Glu Glu Glu Glu Gly Gln Tyr
 545 550 555 560
 Pro Pro Ala Pro Pro Pro Tyr Ser Glu Thr Asp Ser Gln Ala Ser Arg

565	570	575						
Glu Arg Arg Leu Lys Lys Asn Leu Ala	Leu Ser Arg Glu Ser Leu Val							
580	585	590						
Val								
<210> 10								
<211> 2040								
<212> DNA								
<213> Rattus norvegicus								
<400> 10								
accgctcacc	aggtcagttt	tcccccggaaa	gccgaaggca	tgagcttcgc	ccaagttctt	60		
tttatgggtt	agaactcctc	cagacgggg	aaaaaggac	ttgaaatagg	ggcgacgg	120		
agcacgcacc	cttctccgcc	ttggttctcg	ccgcgc	tactctcg	atacttgga	180		
ggggacgcgc	gggcaccgtc	gctgctagac	ggccgcg	atg gcg	ccg gcg gcc ggc	235		
			Met	Ala	Pro Ala Ala Gly			
			1	5				
gcg tgc	gtc gct	ggg gcg	cct gac	tcc cac	cca gct acc	gtg gtc	ttc gtg	283
Ala Cys	Ala Gly	Ala Pro	Asp Ser	His Pro	Ala Thr	Val Val	Phe Val	
10	15	20						
tgt ctc	ttt ctc	atc att	ttc tgc	cca gac	cct gcc	agt gtc	atc cag	331
Cys Leu	Phe Leu	Ile Ile	Phe Cys	Pro Asp	Pro Ala	Ser Ala	Ile Gln	
25	30	35						
gtg act	gtg tct	gac ccc	tac cac	gta gtg	atc ctg	ttc cag	cca gtg	379
Val Thr	Val Ser	Asp Pro	Tyr His	Val Val	Ile Leu	Phe Gln	Pro Val	
40	45	50						
acc ctg	ccc tgc	acc tat	cag atg	agc aac	act ctc	aca gtc	ccc atc	427
Thr Leu	Pro Cys	Thr Tyr	Gln Met	Ser Asn	Thr Leu	Thr Val	Pro Ile	
55	60	65	70					
gtg atc	tgg aag	tac aag	tca ttc	tgc cgg	gac cgt	att gcc	gat gcc	475
Val Ile	Trp Lys	Tyr Lys	Ser Phe	Cys Arg	Asp Arg	Ile Ala	Asp Ala	
75	80	85						
ttc tct	cct gcc	agt gtg	gac aac	cag cta	aat gcc	cag ttg	gca gct	523
Phe Ser	Pro Ala	Ser Val	Asp Asn	Gln Leu	Asn Ala	Gln Leu	Ala Ala	
90	95	100						
ggc aac	ccc ggc	tac aac	ccc tat	gtg gag	tgc cag	gac agt	gta cgc	571
Gly Asn	Pro Gly	Tyr Asn	Pro Tyr	Val Glu	Cys Gln	Asp Ser	Val Arg	
105	110	115						
act gtc	agg gtg	gtg gcc	acc aaa	cag ggc	aat gcg	gtg acc	ctg gga	619
Thr Val	Arg Val	Val Ala	Thr Lys	Gln Gly	Asn Ala	Val Thr	Leu Gly	
120	125	130						
gac tac	tac caa	ggc agg	agg atc	acc ata	aca gga	aat gct	gac ctg	667
Asp Tyr	Tyr Gln	Gly Arg	Ile Thr	Ile Thr	Gly Asn	Ala Asp	Leu	
135	140	145	150					
acc ttc	gag cag	aca gcc	tgg gga	gac agt	gga gtg	tat tac	tgc tct	715
Thr Phe	Glu Gln	Thr Ala	Trp Gly	Asp Ser	Gly Val	Tyr Tyr	Cys Ser	
155	160	165						
gtg gtc	tcg gcc	caa gat	ctg gat	gga aac	aac gag	gcg tac	gca gag	763
Val Val	Ser Ala	Gln Asp	Leu Asp	Gly Asn	Asn Glu	Ala Tyr	Ala Glu	
170	175	180						
ctc atc	gtc ctt	gat tgg	ctc ttt	gtg gtc	gtc tgc	ctg cgc	agc	811
Leu Ile	Val Leu	Asp Trp	Leu Phe	Val Val	Val Val	Cys Leu	Ala Ser	
185	190	195						
ctc ctc	ctc ctc	ctc ctc	ctg ggc	atc tgc	tgg tgc	cag tgc	tgt cct	859
Leu Leu	Leu Phe	Leu Leu	Gly Ile	Cys Trp	Cys Gln	Cys Pro		
200	205	210						
cac acc	tgc tgc	tgc tat	gtc cga	tgt ccc	tgc tgc	cca gac	aag tgc	907
His Thr	Cys Cys	Cys Tyr	Val Arg	Cys Pro	Cys Cys	Pro Asp	Lys Cys	
215	220	225	230					
tgt tgc	cct gag	gct ctt	tat gct	gct ggc	aaa gca	gcc acc	tca ggt	955
Cys Cys	Pro Glu	Ala Leu	Tyr Ala	Ala Gly	Lys Ala	Ala Thr	Ser Gly	
235	240	245						
gtc ccg	agc atc	tat gcc	ccc agc	atc tat	acc cac	ctc tca	cct gcc	1003

Val	Pro	Ser	Ile	Tyr	Ala	Pro	Ser	Ile	Tyr	Thr	His	Leu	Ser	Pro	Ala	
			250			255					260					
aag	acc	cca	cca	cct	ccg	cct	gcc	atg	att	ccc	atg	ggc	cct	ccc	tat	1051
Lys	Thr	Pro	Pro	Pro	Pro	Pro	Ala	Met	Ile	Pro	Met	Gly	Pro	Pro	Tyr	
			265			270				275						
ggg	tac	cct	gga	gac	ttt	gac	aga	cat	agc	tca	gtt	ggt	ggc	cac	agc	1099
Gly	Tyr	Pro	Gly	Asp	Phe	Asp	Arg	His	Ser	Ser	Val	Gly	Gly	His	Ser	
			280			285				290						
tcc	caa	gta	ccc	ctg	ctg	cgt	gac	gtg	gat	ggc	agt	gta	tct	tca	gaa	1147
Ser	Gln	Val	Pro	Leu	Leu	Arg	Asp	Val	Asp	Gly	Ser	Val	Ser	Ser	Glu	
			295			300			305			310				
gta	cga	agt	ggc	tac	agg	atc	cag	gct	aac	cag	caa	gat	gac	tcc	atg	1195
Val	Arg	Ser	Gly	Tyr	Arg	Ile	Gln	Ala	Asn	Gln	Gln	Asp	Asp	Ser	Met	
			315			320			325							
agg	gtc	cta	tac	tat	atg	gag	aaa	gag	cta	gcc	aac	ttt	gac	cct	tcc	1243
Arg	Val	Leu	Tyr	Tyr	Met	Glu	Lys	Glu	Leu	Ala	Asn	Phe	Asp	Pro	Ser	
			330			335			340							
cga	cct	ggc	cct	ccc	aat	ggc	aga	gtg	gaa	cg	gcc	atg	agt	gaa	gta	1291
Arg	Pro	Gly	Pro	Pro	Asn	Gly	Arg	Val	Glu	Arg	Ala	Met	Ser	Glu	Val	
			345			350			355							
acc	tcc	ctc	cat	gaa	gat	gac	tgg	cga	tcg	agg	cct	tcc	agg	gct	cct	1339
Thr	Ser	Leu	His	Glu	Asp	Asp	Trp	Arg	Ser	Arg	Pro	Ser	Arg	Ala	Pro	
			360			365			370							
gcc	ctc	acc	ccc	atc	agg	gat	gag	gag	tgg	aat	cgc	cac	tcc	cca	cag	1387
Ala	Leu	Thr	Pro	Ile	Arg	Asp	Glu	Glu	Trp	Asn	Arg	His	Ser	Pro	Gln	
			375			380			385			390				
agt	ccc	aga	aca	tgg	gag	cag	gaa	ccc	ctt	caa	gaa	caa	cca	agg	ggt	1435
Ser	Pro	Arg	Thr	Trp	Glu	Gln	Glu	Pro	Leu	Gln	Glu	Gln	Pro	Arg	Gly	
			395			400			405							
ggt	tgg	ggg	tct	gga	cgc	cct	cg	gcc	cgc	tct	gtg	gat	gct	cta	gat	1483
Gly	Trp	Gly	Ser	Gly	Arg	Pro	Arg	Ala	Arg	Ser	Val	Asp	Ala	Leu	Asp	
			410			415			420							
gat	atc	aac	cgg	cct	ggc	tcc	act	gaa	tca	gga	cg	tct	tct	ccc	cca	1531
Asp	Ile	Asn	Arg	Pro	Gly	Ser	Thr	Glu	Ser	Gly	Arg	Ser	Ser	Pro	Pro	
			425			430			435							
agt	agt	gga	cgg	aga	gga	cgg	gcc	tat	gca	cct	cca	aga	agt	cgc	agc	1579
Ser	Ser	Gly	Arg	Arg	Gly	Arg	Ala	Tyr	Ala	Pro	Pro	Arg	Ser	Arg	Ser	
			440			445			450							
cg	gat	gac	ctc	tat	gac	cg	gac	gat	cct	agg	gac	ttg	cca	cat	tcc	1627
Arg	Asp	Asp	Leu	Tyr	Asp	Pro	Asp	Asp	Pro	Arg	Asp	Leu	Pro	His	Ser	
			455			460			465			470				
cga	gat	ccc	cac	tat	tat	gac	gac	atc	agg	tct	aga	gat	cca	cgt	gct	1675
Arg	Asp	Pro	His	Tyr	Tyr	Asp	Asp	Ile	Arg	Ser	Arg	Asp	Pro	Arg	Ala	
			475			480			485							
gac	ccc	aga	tcc	cgt	cag	cga	tcc	cga	gat	cct	cg	gat	gct	ggc	tcc	1723
Asp	Pro	Arg	Ser	Arg	Gln	Arg	Ser	Arg	Asp	Pro	Arg	Asp	Ala	Gly	Phe	
			490			495			500							
agg	tca	agg	gac	cct	cag	tat	gat	ggg	cga	cta	tta	gaa	gag	gct	tta	1771
Arg	Ser	Arg	Asp	Pro	Gln	Tyr	Asp	Gly	Arg	Leu	Leu	Glu	Glu	Ala	Leu	
			505			510			515							
aag	aaa	aag	ggg	tcg	ggc	gag	aga	agg	agg	gtt	tac	agg	gag	gaa	gaa	1819
Lys	Lys	Lys	Gly	Ser	Gly	Glu	Arg	Arg	Arg	Val	Tyr	Arg	Glu	Glu	Glu	
			520			525			530							
gag	gaa	gag	gag	ggc	caa	tac	ccc	cca	gca	cct	cca	cct	tac	tca	gag	1867
Glu	Glu	Glu	Glu	Gly	Gln	Tyr	Pro	Pro	Ala	Pro	Pro	Pro	Tyr	Ser	Glu	
			535			540			545			550				
act	gac	tgc	cag	gcc	tca	cg	gag	agg	agg	ctg	aaa	aag	aat	ttg	gcc	1915
Thr	Asp	Ser	Gln	Ala	Ser	Arg	Glu	Arg	Arg	Leu	Lys	Lys	Asn	Leu	Ala	
			555			560			565							
ctg	agt	cgg	gaa	agt	tta	gtc	gtc	tga	tccacgtttt	gtatgttagct						1962
Leu	Ser	Arg	Glu	Ser	Leu	Val	Val	*								
			570			575										
tttgtacttt	tttttaatt	ggaatcaata	ttgatgaaac	ttcaagccta	ataaaatgtc											2022

taatcacaaa aaaaaaaaa

2040

<210> 11
<211> 574
<212> PRT
<213> Rattus norvegicus

<400> 11
Met Ala Pro Ala Ala Gly Ala Cys Ala Gly Ala Pro Asp Ser His Pro
1 5 10 15
Ala Thr Val Val Phe Val Cys Leu Phe Leu Ile Ile Phe Cys Pro Asp
20 25 30
Pro Ala Ser Ala Ile Gln Val Thr Val Ser Asp Pro Tyr His Val Val
35 40 45
Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr Tyr Gln Met Ser Asn
50 55 60
Thr Leu Thr Val Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg
65 70 75 80
Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln Leu
85 90 95
Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu
100 105 110
Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln Gly
115 120 125
Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile
130 135 140
Thr Gly Asn Ala Asp Leu Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser
145 150 155 160
Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Asp Gly Asn
165 170 175
Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Asp Trp Leu Phe Val Val
180 185 190
Val Val Cys Leu Ala Ser Leu Leu Leu Phe Leu Leu Gly Ile Cys
195 200 205
Trp Cys Gln Cys Cys Pro His Thr Cys Cys Tyr Val Arg Cys Pro
210 215 220
Cys Cys Pro Asp Lys Cys Cys Pro Glu Ala Leu Tyr Ala Ala Gly
225 230 235 240
Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Ile Tyr
245 250 255
Thr His Leu Ser Pro Ala Lys Thr Pro Pro Pro Pro Ala Met Ile
260 265 270
Pro Met Gly Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp Arg His Ser
275 280 285
Ser Val Gly Gly His Ser Ser Gln Val Pro Leu Leu Arg Asp Val Asp
290 295 300
Gly Ser Val Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile Gln Ala Asn
305 310 315 320
Gln Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr Met Glu Lys Glu Leu
325 330 335
Ala Asn Phe Asp Pro Ser Arg Pro Gly Pro Pro Asn Gly Arg Val Glu
340 345 350
Arg Ala Met Ser Glu Val Thr Ser Leu His Glu Asp Asp Trp Arg Ser
355 360 365
Arg Pro Ser Arg Ala Pro Ala Leu Thr Pro Ile Arg Asp Glu Glu Trp
370 375 380
Asn Arg His Ser Pro Gln Ser Pro Arg Thr Trp Glu Gln Glu Pro Leu
385 390 395 400
Gln Glu Gln Pro Arg Gly Gly Trp Gly Ser Gly Arg Pro Arg Ala Arg
405 410 415
Ser Val Asp Ala Leu Asp Asp Ile Asn Arg Pro Gly Ser Thr Glu Ser
420 425 430
Gly Arg Ser Ser Pro Pro Ser Ser Gly Arg Arg Gly Arg Ala Tyr Ala

435	440	445
Pro Pro Arg Ser Arg Ser Arg Asp Asp Leu Tyr Asp	Pro Asp Asp Pro	
450	455	460
Arg Asp Leu Pro His Ser Arg Asp Pro His	Tyr Tyr Asp Asp Ile Arg	
465	470	475
Ser Arg Asp Pro Arg Ala Asp Pro Arg Ser	Arg Gln Arg Ser Arg Asp	
485	490	495
Pro Arg Asp Ala Gly Phe Arg Ser Arg Asp Pro	Gln Tyr Asp Gly Arg	
500	505	510
Leu Leu Glu Glu Ala Leu Lys Lys Gly Ser	Gly Glu Arg Arg Arg	
515	520	525
Val Tyr Arg Glu Glu Glu Glu Glu Gly Gln	Tyr Pro Pro Ala	
530	535	540
Pro Pro Pro Tyr Ser Glu Thr Asp Ser Gln Ala	Ser Arg Glu Arg Arg	
545	550	555
Leu Lys Lys Asn Leu Ala Leu Ser Arg Glu	Ser Leu Val Val	
565	570	

<210> 12
<211> 1893
<212> DNA
<213> Rattus norvegicus

<400> 12		
accgctcacc aggtcagttt tccccggaaa gccgaaggca tgagcttcgc ccaagttctt	60	
tttatgggtt agaactcctc cagagcgggg gaaaaaggac ttggaatagg ggccggacgg	120	
agcacgcacc ctctccgccc ttggttctcg ccgcgcgggg tactctcggg atacttggga	180	
ggggacgcgc gggcaccgtc gctgctagac ggccgcgc atg gcg ccg gcg ggc	235	
Met Ala Pro Ala Ala Gly		
1	5	
gcg tgt gct ggg gcg cct gac tcc cac cca gct acc gtg gtc ttc gtg	283	
Ala Cys Ala Gly Ala Pro Asp Ser His Pro Ala Thr Val Val Phe Val		
10	15	20
tgt ctc ttt ctc atc att ttc tgc cca gac cct gcc agt gcc atc cag	331	
Cys Leu Phe Leu Ile Ile Phe Cys Pro Asp Pro Ala Ser Ala Ile Gln		
25	30	35
gtg act gtg tct gac ccc tac cac gta gtg atc ctg ttc cag cca gtg	379	
Val Thr Val Ser Asp Pro Tyr His Val Val Ile Leu Phe Gln Pro Val		
40	45	50
acc ctg ccc tgc acc tat cag atg agc aac act ctc aca gtc ccc atc	427	
Thr Leu Pro Cys Thr Tyr Gln Met Ser Asn Thr Leu Thr Val Pro Ile		
55	60	65
70		
gtg atc tgg aag tac aag tca ttc tgc cggt gac cgt att gcc gat gcc	475	
Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg Asp Arg Ile Ala Asp Ala		
75	80	85
ttc tct cct gcc agt gtg gac aac cag cta aat gcc cag ttg gca gct	523	
Phe Ser Pro Ala Ser Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala		
90	95	100
ggc aac ccc ggc tac aac ccc tat gtg gag tgc cag gac agt gta cgc	571	
Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg		
105	110	115
act gtc agg gtg gtg gcc acc aaa cag ggc aat gcg gtg acc ctg gga	619	
Thr Val Arg Val Val Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly		
120	125	130
gac tac tac caa ggc agg agg atc acc ata aca gga aat gct gac ctg	667	
Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile Thr Gly Asn Ala Asp Leu		
135	140	145
150		
acc ttc gag cag aca gcc tgg gga gac agt gga gtg tat tac tgc tct	715	
Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser		
155	160	165
gtg gtc tcg gcc caa gat ctg gat gga aac aac gag gcg tac gca gag	763	
Val Val Ser Ala Gln Asp Leu Asp Gly Asn Asn Glu Ala Tyr Ala Glu		
170	175	180

ctc atc gtc ctt tat gct gct ggc aaa gca gcc acc tca ggt gtc	811
Leu Ile Val Leu Val Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly Val	
185 190 195	
ccg agc atc tat gcc ccc agc atc tat acc cac ctc tca cct gcc aag	859
Pro Ser Ile Tyr Ala Pro Ser Ile Tyr Thr His Leu Ser Pro Ala Lys	
200 205 210	
acc cca cca cct ccg cct gcc atg att ccc atg ggc cct ccc tat ggg	907
Thr Pro Pro Pro Pro Ala Met Ile Pro Met Gly Pro Pro Tyr Gly	
215 220 225 230	
tac cct gga gac ttt gac aga cat agc tca gtt ggt ggc cac agc tcc	955
Tyr Pro Gly Asp Phe Asp Arg His Ser Ser Val Gly Gly His Ser Ser	
235 240 245	
caa gta ccc ctg ctg cgt gac gtg gat ggc agt gta tct tca gaa gta	1003
Gln Val Pro Leu Leu Arg Asp Val Asp Gly Ser Val Ser Ser Glu Val	
250 255 260	
cga agt ggc tac agg atc cag gct aac cag caa gat gac tcc atg agg	1051
Arg Ser Gly Tyr Arg Ile Gln Ala Asn Gln Gln Asp Asp Ser Met Arg	
265 270 275	
gtc cta tac tat atg gag aaa gag cta gcc aac ttt gac cct tcc cga	1099
Val Leu Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg	
280 285 290	
cct ggc cct ccc aat ggc aga gtg gaa cgg gcc atg agt gaa gta acc	1147
Pro Gly Pro Pro Asn Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr	
295 300 305 310	
tcc ctc cat gaa gat gac tgg cga tcg agg cct tcc agg gct cct gcc	1195
Ser Leu His Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg Ala Pro Ala	
315 320 325	
ctc acc ccc atc agg gag gag tgg aat cgc cac tcc cca cag agt	1243
Leu Thr Pro Ile Arg Asp Glu Glu Trp Asn Arg His Ser Pro Gln Ser	
330 335 340	
ccc aga aca tgg gag cag gaa ccc ctt caa gaa caa cca agg ggt ggt	1291
Pro Arg Thr Trp Glu Gln Glu Pro Leu Gln Glu Gln Pro Arg Gly Gly	
345 350 355	
tgg ggg tct gga cgc cct cgg gcc cgc tct gtg gat gct cta gat gat	1339
Trp Gly Ser Gly Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp	
360 365 370	
atc aac cgg cct ggc tcc act gaa tca gga cgg tct tct ccc cca agt	1387
Ile Asn Arg Pro Gly Ser Thr Glu Ser Gly Arg Ser Ser Pro Pro Ser	
375 380 385 390	
agt gga cgg aga gga cgg gcc tat gca cct cca aga agt cgc agc cgg	1435
Ser Gly Arg Arg Gly Arg Ala Tyr Ala Pro Pro Arg Ser Arg Ser Arg	
395 400 405	
gat gac ctc tat gac ccg gac gat cct agg gac ttg cca cat tcc cga	1483
Asp Asp Leu Tyr Asp Pro Asp Pro Arg Asp Leu Pro His Ser Arg	
410 415 420	
gat ccc cac tat tat gac gac atc agg tct aga gat cca cgt gct gac	1531
Asp Pro His Tyr Tyr Asp Asp Ile Arg Ser Arg Asp Pro Arg Ala Asp	
425 430 435	
ccc aga tcc cgt cag cga tcc cga gat cct cgg gat gct ggc ttc agg	1579
Pro Arg Ser Arg Gln Arg Ser Arg Asp Pro Arg Asp Ala Gly Phe Arg	
440 445 450	
tca agg gac cct cag tat gat ggg cga cta tta gaa gag gct tta aag	1627
Ser Arg Asp Pro Gln Tyr Asp Gly Arg Leu Leu Glu Glu Ala Leu Lys	
455 460 465 470	
aaa aag ggg tcg ggc gag aga agg agg gtt tac agg gag gaa gaa gag	1675
Lys Lys Gly Ser Gly Glu Arg Arg Val Tyr Arg Glu Glu Glu Glu	
475 480 485	
gaa gag gag ggc caa tac ccc cca gca cct cca cct tac tca gag act	1723
Glu Glu Glu Gly Gln Tyr Pro Pro Ala Pro Pro Pro Tyr Ser Glu Thr	
490 495 500	
gac tcg cag gcc tca cgg gag agg agg ctg aaa aag aat ttg gcc ctg	1771
Asp Ser Gln Ala Ser Arg Glu Arg Arg Leu Lys Lys Asn Leu Ala Leu	
505 510 515	

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agt cg gaa agt tta gtc gtc tga tccacgtttt gtatgttagct tttgtacttt 1825
Ser Arg Glu Ser Leu Val Val *
      520          525
ttttttaattt ggaatcaata ttgatgaaac ttcaagccctt ataaaaatgtc taatcacaaa 1885
aaaaaaaaa 1893

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<210> 13
<211> 525
<212> PRT
<213> *Rattus norvegicus*

<400> 13
 Met Ala Pro Ala Ala Gly Ala Cys Ala Gly Ala Pro Asp Ser His Pro
 1 5 10 15
 Ala Thr Val Val Phe Val Cys Leu Phe Leu Ile Ile Phe Cys Pro Asp
 20 25 30
 Pro Ala Ser Ala Ile Gln Val Thr Val Ser Asp Pro Tyr His Val Val
 35 40 45
 Ile Leu Phe Gln Pro Val Thr Leu Pro Cys Thr Tyr Gln Met Ser Asn
 50 55 60
 Thr Leu Thr Val Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg
 65 70 75 80
 Asp Arg Ile Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln Leu
 85 90 95
 Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu
 100 105 110
 Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln Gly
 115 120 125
 Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile
 130 135 140
 Thr Gly Asn Ala Asp Leu Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser
 145 150 155 160
 Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Asp Gly Asn
 165 170 175
 Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Val Tyr Ala Ala Gly Lys
 180 185 190
 Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Ile Tyr Thr
 195 200 205
 His Leu Ser Pro Ala Lys Thr Pro Pro Pro Pro Pro Ala Met Ile Pro
 210 215 220
 Met Gly Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp Arg His Ser Ser
 225 230 235 240
 Val Gly Gly His Ser Ser Gln Val Pro Leu Leu Arg Asp Val Asp Gly
 245 250 255
 Ser Val Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile Gln Ala Asn Gln
 260 265 270
 Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr Met Glu Lys Glu Leu Ala
 275 280 285
 Asn Phe Asp Pro Ser Arg Pro Gly Pro Pro Asn Gly Arg Val Glu Arg
 290 295 300
 Ala Met Ser Glu Val Thr Ser Leu His Glu Asp Asp Trp Arg Ser Arg
 305 310 315 320
 Pro Ser Arg Ala Pro Ala Leu Thr Pro Ile Arg Asp Glu Glu Trp Asn
 325 330 335
 Arg His Ser Pro Gln Ser Pro Arg Thr Trp Glu Gln Glu Pro Leu Gln
 340 345 350
 Glu Gln Pro Arg Gly Gly Trp Gly Ser Gly Arg Pro Arg Ala Arg Ser
 355 360 365
 Val Asp Ala Leu Asp Asp Ile Asn Arg Pro Gly Ser Thr Glu Ser Gly
 370 375 380
 Arg Ser Ser Pro Pro Ser Ser Gly Arg Arg Gly Arg Ala Tyr Ala Pro
 385 390 395 400
 Pro Arg Ser Arg Ser Arg Asp Asp Leu Tyr Asp Pro Asp Asp Pro Arg

405	410	415
Asp Leu Pro His Ser Arg Asp Pro His	Tyr Tyr Asp Asp Ile Arg Ser	
420	425	430
Arg Asp Pro Arg Ala Asp Pro Arg Ser Arg Gln Arg Ser Arg Asp Pro		
435	440	445
Arg Asp Ala Gly Phe Arg Ser Arg Asp Pro Gln Tyr Asp Gly Arg Leu		
450	455	460
Leu Glu Glu Ala Leu Lys Lys Gly Ser Gly Glu Arg Arg Arg Val		
465	470	475
Tyr Arg Glu Glu Glu Glu Gly Gln Tyr Pro Pro Ala Pro		
485	490	495
Pro Pro Tyr Ser Glu Thr Asp Ser Gln Ala Ser Arg Glu Arg Arg Leu		
500	505	510
Lys Lys Asn Leu Ala Leu Ser Arg Glu Ser Leu Val Val		
515	520	525

<210> 14
<211> 1886
<212> DNA
<213> Mus musculus

<400> 14		
gcaccgtcgc tgctagacgg ccgcg atg gcg ccg gcg gcc agc gcg tgt gct		52
Met Ala Pro Ala Ala Ser Ala Cys Ala		
1	5	
ggg gcg cct ggc tcc cac ccg gcc acc acg atc ttc gtg tgt ctt ttt		100
Gly Ala Pro Gly Ser His Pro Ala Thr Thr Ile Phe Val Cys Leu Phe		
10	15	20
25		
ctc atc att tac tgc cca gac cgt gcc agt gcc atc cag gtg acc gtc		148
Leu Ile Tyr Cys Pro Asp Arg Ala Ser Ala Ile Gln Val Thr Val		
30	35	40
cct gac ccc tac cac gta gtg atc ctg ttc cag cca gtg aca cta cac		196
Pro Asp Pro Tyr His Val Val Ile Leu Phe Gln Pro Val Thr Leu His		
45	50	55
tgc acc tac cag atg agc aat acc ctc aca gcc cct atc gtg atc tgg		244
Cys Thr Tyr Gln Met Ser Asn Thr Leu Thr Ala Pro Ile Val Ile Trp		
60	65	70
aag tat aag tcg ttc tgt cgg gac cgt gtt gcc gac gcc ttc tcc cct		292
Lys Tyr Lys Ser Phe Cys Arg Asp Arg Val Ala Asp Ala Phe Ser Pro		
75	80	85
gcc agc gtg gac aac cag ctc aac gcc cag ctg gcg gct ggc aac ccc		340
Ala Ser Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro		
90	95	100
105		
ggc tac aac ccc tat gtg gag tgc cag gac agc gta cgc act gtc agg		388
Gly Tyr Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg Thr Val Arg		
110	115	120
gtg gtg gcc acc aaa cag ggc aat gct gtg acc ctg gga gac tac tac		436
Val Val Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr		
125	130	135
cag ggc agg aga atc acc atc aca gga aat gct ggc ctg acc ttc gag		484
Gln Gly Arg Arg Ile Thr Ile Thr Gly Asn Ala Gly Leu Thr Phe Glu		
140	145	150
cag acg gcc tgg gga gac agt gga gtg tat tac tgc tcc gtg gtc tca		532
Gln Thr Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser Val Val Ser		
155	160	165
gcc caa gat ctg gat ggg aac aac gag gcg tac gca gag ctc att gtc		580
Ala Gln Asp Leu Asp Gly Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val		
170	175	180
185		
ctt ggc agg acc tca gaa gcc cct gag ctc cta cct ggt ttt cgg gcg		628
Leu Gly Arg Thr Ser Glu Ala Pro Glu Leu Leu Pro Gly Phe Arg Ala		
190	195	200
ggg ccc ttg gaa gat tgg ctc ttt gtg gtc gtc tgc ctg gca agc		676
Gly Pro Leu Glu Asp Trp Leu Phe Val Val Val Cys Leu Ala Ser		

205	210	215		
ctc ctc ttc ctc ctc ctg ggc atc tgc tgg tgc cag tgc tgt ccc			724	
Leu Leu Phe Phe Leu Leu Leu Gly Ile Cys Trp Cys Gln Cys Cys Pro				
220	225	230		
cac acc tgc tgc tat gtc aga tgt ccc tgc tgc cca gac aag tgc			772	
His Thr Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro Asp Lys Cys				
235	240	245		
tgt tgc cct gag gcc ctt tat gct gct ggc aaa gca gcc acc tca ggt			820	
Cys Cys Pro Glu Ala Leu Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly				
250	255	260	265	
gtg cca agc atc tat gcc ccc agc atc tat acc cac ctc tct cct gcc			868	
Val Pro Ser Ile Tyr Ala Pro Ser Ile Tyr Thr His Leu Ser Pro Ala				
270	275	280		
aag act ccg cca cct ccg cct gcc atg att ccc atg cgt cct ccc tat			916	
Lys Thr Pro Pro Pro Pro Ala Met Ile Pro Met Arg Pro Pro Tyr				
285	290	295		
ggg tac cct gga gac ttt gac agg acc agc tca gtt ggt ggc cac agc			964	
Gly Tyr Pro Gly Asp Phe Asp Arg Thr Ser Ser Val Gly Gly His Ser				
300	305	310		
tcc cag gtg ccc ctg ctg cgt gaa gtg gat ggg agc gta tct tca gaa			1012	
Ser Gln Val Pro Leu Leu Arg Glu Val Asp Gly Ser Val Ser Ser Glu				
315	320	325		
gta cga agt ggc tac agg atc cag gct aac cag caa gat gac tcc atg			1060	
Val Arg Ser Gly Tyr Arg Ile Gln Ala Asn Gln Gln Asp Asp Ser Met				
330	335	340	345	
agg gtc cta tac tat atg gag aag gag cta gcc aac ttc gat cct tcc			1108	
Arg Val Leu Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser				
350	355	360		
cgg cct ggc ccc aat ggc cga gtg gaa cggt gcc atg agt gaa gta			1156	
Arg Pro Gly Pro Pro Asn Gly Arg Val Glu Arg Ala Met Ser Glu Val				
365	370	375		
acc tcc ctc cat gaa gat gac tgg cga tct cgg cct tcc agg gct cct			1204	
Thr Ser Leu His Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg Ala Pro				
380	385	390		
gcc ctc aca ccc atc agg gat gag gag tgg aat cgc cac tcc cct cgg			1252	
Ala Leu Thr Pro Ile Arg Asp Glu Glu Trp Asn Arg His Ser Pro Arg				
395	400	405		
agt ccc aga aca tgg gag cag gaa ccc ctt caa gaa cag cca agg ggt			1300	
Ser Pro Arg Thr Trp Glu Gln Glu Pro Leu Gln Glu Gln Pro Arg Gly				
410	415	420	425	
ggt tgg ggg tct ggg cgg cct cgg gcc cgc tct gtg gat gct cta gat			1348	
Gly Trp Gly Ser Gly Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp				
430	435	440		
gac atc aac cgg cct ggc tcc act gaa tca gga agg tct tct ccc cca			1396	
Asp Ile Asn Arg Pro Gly Ser Thr Glu Ser Gly Arg Ser Ser Pro Pro				
445	450	455		
agt agt gga cgg aga ggg cgg gcc tat gca cct ccg aga agt cgc agc			1444	
Ser Ser Gly Arg Arg Gly Arg Ala Tyr Ala Pro Pro Arg Ser Arg Ser				
460	465	470		
cggt gat gac ctc tat gac ccc gac gat cct aga gac ttg cca cat tcc			1492	
Arg Asp Asp Leu Tyr Asp Pro Asp Asp Pro Arg Asp Leu Pro His Ser				
475	480	485		
cga gat ccc cac tat tat gat gat ttg agg tct agg gat cca cgt gct			1540	
Arg Asp Pro His Tyr Tyr Asp Asp Leu Arg Ser Arg Asp Pro Arg Ala				
490	495	500	505	
gac ccc aga tcc cgt cag cga tcc cac gat cct ccg gat gct ggc ttc			1588	
Asp Pro Arg Ser Arg Gln Arg Ser His Asp Pro Arg Asp Ala Gly Phe				
510	515	520		
agg tca cgg gac cct cag tat gat ggg cga ctc tta gaa gag gct tta			1636	
Arg Ser Arg Asp Pro Gln Tyr Asp Gly Arg Leu Leu Glu Glu Ala Leu				
525	530	535		
aag aaa aaa ggg gct ggg gag aga aga cgc gtt tac agg gag gaa gaa			1684	
Lys Lys Lys Gly Ala Gly Glu Arg Arg Val Tyr Arg Glu Glu Glu				

540	545	550		
gaa gaa gaa gag gag ggc cac tat ccc cca gca cct ccg cct tac tct			1732	
Glu Glu Glu Glu Gly His Tyr Pro Pro Ala Pro Pro Pro Tyr Ser				
555	560	565		
gag act gac tcg cag gcc tcg agg gag cg agg atg aaa aag aat ttg			1780	
Glu Thr Asp Ser Gln Ala Ser Arg Glu Arg Arg Met Lys Lys Asn Leu				
570	575	580	585	
gcc ctg agt cgg gaa agt tta gtc gtc tga tcccacgttt tgttatgttag			1830	
Ala Leu Ser Arg Glu Ser Leu Val Val *				
590	595			
cttttatact ttttaatttgaatatttgcataaaacttttc accaaggccta ataaaaa			1886	
<210> 15				
<211> 1829				
<212> DNA				
<213> Mus musculus				
<400> 15				
gcaccgtcgc tgcttagacgg ccgcgc atg gcg ccg gcg gcc agc gcg tgt gct			52	
Met Ala Pro Ala Ala Ser Ala Cys Ala				
1	5			
ggg gcg cct ggc tcc cac ccg gcc acc acg atc ttc gtg tgt ctt ttt			100	
Gly Ala Pro Gly Ser His Pro Ala Thr Thr Ile Phe Val Cys Leu Phe				
10	15	20	25	
ctc atc att tac tgc cca gac cgt gcc agt gcc atc cag gtg acc gtg			148	
Leu Ile Ile Tyr Cys Pro Asp Arg Ala Ser Ala Ile Gln Val Thr Val				
30	35	40		
cct gac ccc tac cac gta gtg atc ctg ttc cag cca gtg aca cta cac			196	
Pro Asp Pro Tyr His Val Val Ile Leu Phe Gln Pro Val Thr Leu His				
45	50	55		
tgc acc tac cag atg agc aat acc ctc aca gcc cct atc gtg atc tgg			244	
Cys Thr Tyr Gln Met Ser Asn Thr Leu Thr Ala Pro Ile Val Ile Trp				
60	65	70		
aag tat aag tcg ttc tgt cgg gac cgt gtt gcc gac gcc ttc tcc cct			292	
Lys Tyr Lys Ser Phe Cys Arg Asp Arg Val Ala Asp Ala Phe Ser Pro				
75	80	85		
gcc agc gtg gac aac cag ctc aac gcc cag ctg gcg gct ggc aac ccc			340	
Ala Ser Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro				
90	95	100	105	
ggc tac aac ccc tat gtg gag tgc cag gac agc gta cgc act gtc agg			388	
Gly Tyr Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg Thr Val Arg				
110	115	120		
gtg gtg gcc acc aaa cag ggc aat gct gtg acc ctg gga gac tac tac			436	
Val Val Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr				
125	130	135		
cag ggc agg aga atc acc atc aca gga aat gct ggc ctg acc ttc gag			484	
Gln Gly Arg Arg Ile Thr Ile Thr Gly Asn Ala Gly Leu Thr Phe Glu				
140	145	150		
cag acg gcc tgg gga gac agt gga gtg tat tac tgc tcc gtg gtc tca			532	
Gln Thr Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser Val Val Ser				
155	160	165		
gcc caa gat ctg gat ggg aac aac gag gcg tac gca gag ctc att gtc			580	
Ala Gln Asp Leu Asp Gly Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val				
170	175	180	185	
ctt gat tgg ctc ttt gtg gtc gtg tgc ctg gca agc ctc ctc ttc			628	
Leu Asp Trp Leu Phe Val Val Val Cys Leu Ala Ser Leu Leu Phe				
190	195	200		
tgc tgc ctc ctg ggc atc tgc tgg tgc cag tgc tgt ccc cac acc tgc			676	
Phe Leu Leu Leu Gly Ile Cys Trp Cys Gln Cys Cys Pro His Thr Cys				
205	210	215		
tgc tgc tat gtc aga tgt ccc tgc tgc cca gac aag tgc tgt tgc cct			724	
Cys Cys Tyr Val Arg Cys Pro Cys Cys Pro Asp Lys Cys Cys Cys Pro				
220	225	230		

gag gcc ctt tat gct gct ggc aaa gca gcc acc tca ggt gtg cca agc	772
Glu Ala Leu Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro Ser	
235 240 245	
atc tat gcc ccc agc atc tat acc cac ctc tct cct gcc aag act ccg	820
Ile Tyr Ala Pro Ser Ile Tyr Thr His Leu Ser Pro Ala Lys Thr Pro	
250 255 260 265	
cca cct ccg cct gcc atg att ccc atg cgt cct ccc tat ggg tac cct	868
Pro Pro Pro Pro Ala Met Ile Pro Met Arg Pro Pro Tyr Gly Tyr Pro	
270 275 280	
gga gac ttt gag agg acc agc tca gtt ggt ggc cac agc tcc cag gtg	916
Gly Asp Phe Asp Arg Thr Ser Ser Val Gly Gly His Ser Ser Gln Val	
285 290 295	
ccc ctg ctg cgt gaa gtg gat ggg agc gta tct tca gaa gta cga agt	964
Pro Leu Leu Arg Glu Val Asp Gly Ser Val Ser Ser Glu Val Arg Ser	
300 305 310	
ggc tac agg atc cag gct aac cag caa gat gac tcc atg agg gtc cta	1012
Gly Tyr Arg Ile Gln Ala Asn Gln Gln Asp Asp Ser Met Arg Val Leu	
315 320 325	
tac tat atg gag aag gag cta gcc aac ttc gat cct tcc cgg cct ggc	1060
Tyr Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Pro Gly	
330 335 340 345	
cct ccc aat ggc cga gtg gaa cgg gcc atg agt gaa gta acc tcc ctc	1108
Pro Pro Asn Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser Leu	
350 355 360	
cat gaa gat gac tgg cga tct cgg cct tcc agg gct cct gcc ctc aca	1156
His Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg Ala Pro Ala Leu Thr	
365 370 375	
ccc atc agg gat gag gag tgg aat cgc cac tcc cct cgg agt ccc aga	1204
Pro Ile Arg Asp Glu Glu Trp Asn Arg His Ser Pro Arg Ser Pro Arg	
380 385 390	
aca tgg gag cag gaa ccc ctt caa gaa cag cca agg ggt ggt tgg ggg	1252
Thr Trp Glu Gln Glu Pro Leu Gln Glu Gln Pro Arg Gly Gly Trp Gly	
395 400 405	
tct ggg cgg cct cgg gcc cgc tct gtg gat gct cta gat gac atc aac	1300
Ser Gly Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Ile Asn	
410 415 420 425	
cgg cct ggc tcc act gaa tca gga agg tct tct ccc cca agt agt gga	1348
Arg Pro Gly Ser Thr Glu Ser Gly Arg Ser Ser Pro Pro Ser Ser Gly	
430 435 440	
cgg aga ggg cgg gcc tat gca cct ccg aga agt cgc agc cgg gat gac	1396
Arg Arg Gly Arg Ala Tyr Ala Pro Pro Arg Ser Arg Ser Arg Asp Asp	
445 450 455	
ctc tat gac ccc gac gat cct aga gac ttg cca cat tcc cga gat ccc	1444
Leu Tyr Asp Pro Asp Asp Pro Arg Asp Leu Pro His Ser Arg Asp Pro	
460 465 470	
cac tat tat gat gat ttg agg tct agg gat cca cgt gct gac ccc aga	1492
His Tyr Tyr Asp Asp Leu Arg Ser Arg Asp Pro Arg Ala Asp Pro Arg	
475 480 485	
tcc cgt cag cga tcc cac gat cct cgg gat gct ggc ttc agg tca cgg	1540
Ser Arg Gln Arg Ser His Asp Pro Arg Asp Ala Gly Phe Arg Ser Arg	
490 495 500 505	
gac cct cag tat gat ggg cga ctc tta gaa gag gct tta aag aaa aaa	1588
Asp Pro Gln Tyr Asp Gly Arg Leu Leu Glu Glu Ala Leu Lys Lys Lys	
510 515 520	
ggg gct ggg gag aga aga cgc gtt tac agg gag gaa gaa gaa gaa gaa	1636
Gly Ala Gly Glu Arg Arg Val Tyr Arg Glu Glu Glu Glu Glu Glu	
525 530 535	
gag gag ggc cac tat ccc cca gca cct ccg cct tac tct gag act gac	1684
Glu Glu Gly His Tyr Pro Pro Ala Pro Pro Tyr Ser Glu Thr Asp	
540 545 550	
tcg cag gcc tcg agg gag cgg agg atg aaa aag aat ttg gcc ctg agt	1732
Ser Gln Ala Ser Arg Glu Arg Arg Met Lys Lys Asn Leu Ala Leu Ser	
555 560 565	

cg^g gaa agt tta gtc gtc tga tcccacgttt tg^tttatgttag ct^tttatact 1783
 Arg Glu Ser Leu Val Val *
 570 575
 tt^tttaattg gaatattgat gaaa^cactcttc accaaggccta ataaaa 1829

<210> 16
 <211> 1682
 <212> DNA
 <213> Mus musculus

<400> 16

gcaccgtcgc tgctagacgg ccgcgc atg gcg ccg gcg gcc agc gcg tgt gct	52
Met Ala Pro Ala Ala Ser Ala Cys Ala	
1 5	
ggg gcg cct ggc tcc cac ccg gcc acc acg atc ttc gtg tgt ctt ttt	100
Gly Ala Pro Gly Ser His Pro Ala Thr Thr Ile Phe Val Cys Leu Phe	
10 15 20 25	
ctc atc att tac tgc cca gac cgt gcc agt gcc atc cag gtg acc gtg	148
Leu Ile Ile Tyr Cys Pro Asp Arg Ala Ser Ala Ile Gln Val Thr Val	
30 35 40	
cct gac ccc tac cac gta gtg atc ctg ttc cag cca gtg aca cta cac	196
Pro Asp Pro Tyr His Val Val Ile Leu Phe Gln Pro Val Thr Leu His	
45 50 55	
tgc acc tac cag atg agc aat acc ctc aca gcc cct atc gtg atc tgg	244
Cys Thr Tyr Gln Met Ser Asn Thr Leu Thr Ala Pro Ile Val Ile Trp	
60 65 70	
aag tat aag tcg ttc tgt cgg gac cgt gtt gcc gac gcc ttc tcc cct	292
Lys Tyr Lys Ser Phe Cys Arg Asp Arg Val Ala Asp Ala Phe Ser Pro	
75 80 85	
gcc agc gtg gac aac cag ctc aac gcc cag ctg gcg gct ggc aac ccc	340
Ala Ser Val Asp Asn Gln Leu Asn Ala Gln Leu Ala Ala Gly Asn Pro	
90 95 100 105	
ggc tac aac ccc tat gtg gag tgc cag gac agc gta cgc act gtc agg	388
Gly Tyr Asn Pro Tyr Val Glu Cys Gln Asp Ser Val Arg Thr Val Arg	
110 115 120	
gtg gtg gcc acc aaa cag ggc aat gct gtg acc ctg gga gac tac tac	436
Val Val Ala Thr Lys Gln Gly Asn Ala Val Thr Leu Gly Asp Tyr Tyr	
125 130 135	
cag ggc agg aga atc acc atc aca gga aat gct ggc ctg acc ttc gag	484
Gln Gly Arg Arg Ile Thr Ile Thr Gly Asn Ala Gly Leu Thr Phe Glu	
140 145 150	
cag acg gcc tgg gga gac agt gga gtg tat tac tgc tcc gtg gtc tca	532
Gln Thr Ala Trp Gly Asp Ser Gly Val Tyr Tyr Cys Ser Val Val Ser	
155 160 165	
gcc caa gat ctg gat ggg aac aac gag gcg tac gca gag ctc att gtc	580
Ala Gln Asp Leu Asp Gly Asn Asn Glu Ala Tyr Ala Glu Leu Ile Val	
170 175 180 185	
ctt gtt tat gct ggc aaa gca gcc acc tca ggt gtg cca agc atc	628
Leu Val Tyr Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro Ser Ile	
190 195 200	
tat gcc ccc agc atc tat acc cac ctc tct cct gcc aag act ccg cca	676
Tyr Ala Pro Ser Ile Tyr Thr His Leu Ser Pro Ala Lys Thr Pro Pro	
205 210 215	
cct ccg cct gcc atg att ccc atg cgt cct ccc tat ggg tac cct gga	724
Pro Pro Pro Ala Met Ile Pro Met Arg Pro Pro Tyr Gly Tyr Pro Gly	
220 225 230	
gac ttt gac agg acc agc tca gtt ggt ggc cac agc tcc cag gtg ccc	772
Asp Phe Asp Arg Thr Ser Ser Val Gly Gly His Ser Ser Gln Val Pro	
235 240 245	
ctg ctg cgt gaa gtg gat ggg agc gta tct tca gaa gta cga agt ggc	820
Leu Leu Arg Glu Val Asp Gly Ser Val Ser Ser Glu Val Arg Ser Gly	
250 255 260 265	
tac agg atc cag gct aac cag caa gat gac tcc atg agg gtc cta tac	868

Tyr Arg Ile Gln Ala Asn Gln Gln Asp Asp Ser Met Arg Val Leu Tyr				
270	275	280		
tat atg gag aag gag cta gcc aac ttc gat cct tcc cg ^g cct ggc cct			916	
Tyr Met Glu Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Pro Gly Pro				
285	290	295		
ccc aat ggc cga gtg gaa cg ^g gcc atg agt gaa gta acc tcc ctc cat			964	
Pro Asn Gly Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser Leu His				
300	305	310		
gaa gat gac tgg cga tct cg ^g cct' tcc agg gct cct gcc ctc aca ccc			1012	
Glu Asp Asp Trp Arg Ser Arg Pro Ser Arg Ala Pro Ala Leu Thr Pro				
315	320	325		
atc agg gat gag gag tgg aat cgc cac tcc cct cg ^g agt ccc aga aca			1060	
Ile Arg Asp Glu Glu Trp Asn Arg His Ser Pro Arg Ser Pro Arg Thr				
330	335	340	345	
tgg gag cag gaa ccc ctt caa gaa cag cca agg ggt ggt tgg ggg tct			1108	
Trp Glu Gln Glu Pro Leu Gln Glu Pro Arg Gly Gly Trp Gly Ser				
350	355	360		
ggg cg ^g cct cg ^g gcc cgc tct gtg gat gct cta gat gac atc aac cg ^g			1156	
Gly Arg Pro Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Ile Asn Arg				
365	370	375		
cct ggc tcc act gaa tca gga agg tct tct ccc cca agt agt gga cg ^g			1204	
Pro Gly Ser Thr Glu Ser Gly Arg Ser Ser Pro Pro Ser Ser Gly Arg				
380	385	390		
aga ggg cg ^g gcc tat gca cct cg ^g aga agt cgc agc cg ^g gat gac ctc			1252	
Arg Gly Arg Ala Tyr Ala Pro Pro Arg Ser Arg Ser Arg Asp Asp Leu				
395	400	405		
tat gac ccc gac gat cct aga gac ttg cca cat tcc cg ^g a gat ccc cac			1300	
Tyr Asp Pro Asp Asp Pro Arg Asp Leu Pro His Ser Arg Asp Pro His				
410	415	420	425	
tat tat gat gat ttg agg tct agg gat cca cgt gct gac ccc aga tcc			1348	
Tyr Tyr Asp Asp Leu Arg Ser Arg Asp Pro Arg Ala Asp Pro Arg Ser				
430	435	440		
cgt cag cga tcc cac gat cct cg ^g gat gct ggc ttc agg tca cg ^g gac			1396	
Arg Gln Arg Ser His Asp Pro Arg Asp Ala Gly Phe Arg Ser Arg Asp				
445	450	455		
cct cag tat gat ggg cga ctc tta gaa gag gct tta aag aaa aaa ggg			1444	
Pro Gln Tyr Asp Gly Arg Leu Leu Glu Glu Ala Leu Lys Lys Lys Gly				
460	465	470		
gct ggg gag aga aga cg ^g gtt tac agg gag gaa gaa gaa gaa gag			1492	
Ala Gly Glu Arg Arg Val Tyr Arg Glu Glu Glu Glu Glu Glu Glu				
475	480	485		
gag ggc cac tat ccc cca gca cct cg ^g cct tac tct gag act gac tcg			1540	
Glu Gly His Tyr Pro Pro Ala Pro Pro Tyr Ser Glu Thr Asp Ser				
490	495	500	505	
cag gcc tcg agg gag cg ^g agg atg aaa aag aat ttg gcc ctg agt cg ^g			1588	
Gln Ala Ser Arg Glu Arg Arg Met Lys Lys Asn Leu Ala Leu Ser Arg				
510	515	520		
gaa agt tta gtc gtc tga tccccacgttt tgttatgttag ctttataact			1636	
Glu Ser Leu Val Val *				
525				
tttttaattg gaatatttgat gaaactcttc accaaggcta ataaaa			1682	

<210> 17
<211> 594
<212> PRT
<213> Mus musculus

<400> 17
Met Ala Pro Ala Ala Ser Ala Cys Ala Gly Ala Pro Gly Ser His Pro
1 5 10 15
Ala Thr Thr Ile Phe Val Cys Leu Phe Leu Ile Ile Tyr Cys Pro Asp
20 25 30
Arg Ala Ser Ala Ile Gln Val Thr Val Pro Asp Pro Tyr His Val Val

35	40	45
Ile Leu Phe Gln Pro Val Thr	Leu His Cys Thr Tyr	Gln Met Ser Asn
50	55	60
Thr Leu Thr Ala Pro Ile Val Ile Trp Lys Tyr	Lys Ser Phe Cys Arg	
65	70	75
Asp Arg Val Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln Leu		80
85	90	95
Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu		
100	105	110
Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln Gly		
115	120	125
Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile		
130	135	140
Thr Gly Asn Ala Gly Leu Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser		
145	150	155
Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Asp Gly Asn		160
165	170	175
Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Gly Arg Thr Ser Glu Ala		
180	185	190
Pro Glu Leu Leu Pro Gly Phe Arg Ala Gly Pro Leu Glu Asp Trp Leu		
195	200	205
Phe Val Val Val Cys Leu Ala Ser Leu Leu Phe Phe Leu Leu Leu		
210	215	220
Gly Ile Cys Trp Cys Gln Cys Cys Pro His Thr Cys Cys Cys Tyr Val		
225	230	235
Arg Cys Pro Cys Cys Pro Asp Lys Cys Cys Cys Pro Glu Ala Leu Tyr		240
245	250	255
Ala Ala Gly Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro		
260	265	270
Ser Ile Tyr Thr His Leu Ser Pro Ala Lys Thr Pro Pro Pro Pro		
275	280	285
Ala Met Ile Pro Met Arg Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp		
290	295	300
Arg Thr Ser Ser Val Gly Gly His Ser Ser Gln Val Pro Leu Leu Arg		
305	310	315
Glu Val Asp Gly Ser Val Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile		320
325	330	335
Gln Ala Asn Gln Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr Met Glu		
340	345	350
Lys Glu Leu Ala Asn Phe Asp Pro Ser Arg Pro Gly Pro Pro Asn Gly		
355	360	365
Arg Val Glu Arg Ala Met Ser Glu Val Thr Ser Leu His Glu Asp Asp		
370	375	380
Trp Arg Ser Arg Pro Ser Arg Ala Pro Ala Leu Thr Pro Ile Arg Asp		
385	390	395
Glu Glu Trp Asn Arg His Ser Pro Arg Ser Pro Arg Thr Trp Glu Gln		400
405	410	415
Glu Pro Leu Gln Glu Gln Pro Arg Gly Gly Trp Gly Ser Gly Arg Pro		
420	425	430
Arg Ala Arg Ser Val Asp Ala Leu Asp Asp Ile Asn Arg Pro Gly Ser		
435	440	445
Thr Glu Ser Gly Arg Ser Ser Pro Pro Ser Ser Gly Arg Arg Gly Arg		
450	455	460
Ala Tyr Ala Pro Pro Arg Ser Arg Ser Arg Asp Asp Leu Tyr Asp Pro		
465	470	475
Asp Asp Pro Arg Asp Leu Pro His Ser Arg Asp Pro His Tyr Tyr Asp		480
485	490	495
Asp Leu Arg Ser Arg Asp Pro Arg Ala Asp Pro Arg Ser Arg Gln Arg		
500	505	510
Ser His Asp Pro Arg Asp Ala Gly Phe Arg Ser Arg Asp Pro Gln Tyr		
515	520	525
Asp Gly Arg Leu Leu Glu Glu Ala Leu Lys Lys Lys Gly Ala Gly Glu		
530	535	540

Arg Arg Arg Val Tyr Arg Glu Glu Glu Glu Glu Glu Gly His
 545 550 555 560
 Tyr Pro Pro Ala Pro Pro Tyr Ser Glu Thr Asp Ser Gln Ala Ser
 565 570 575
 Arg Glu Arg Arg Met Lys Lys Asn Leu Ala Leu Ser Arg Glu Ser Leu
 580 585 590
 Val Val

<210> 18
 <211> 575
 <212> PRT
 <213> Mus musculus

<400> 18
 Met Ala Pro Ala Ala Ser Ala Cys Ala Gly Ala Pro Gly Ser His Pro
 1 5 10 15
 Ala Thr Thr Ile Phe Val Cys Leu Phe Leu Ile Ile Tyr Cys Pro Asp
 20 25 30
 Arg Ala Ser Ala Ile Gln Val Thr Val Pro Asp Pro Tyr His Val Val
 35 40 45
 Ile Leu Phe Gln Pro Val Thr Leu His Cys Thr Tyr Gln Met Ser Asn
 50 55 60
 Thr Leu Thr Ala Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg
 65 70 75 80
 Asp Arg Val Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln Leu
 85 90 95
 Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu
 100 105 110
 Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln Gly
 115 120 125
 Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile
 130 135 140
 Thr Gly Asn Ala Gly Leu Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser
 145 150 155 160
 Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Asp Gly Asn
 165 170 175
 Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Asp Trp Leu Phe Val Val
 180 185 190
 Val Val Cys Leu Ala Ser Leu Leu Phe Phe Leu Leu Gly Ile Cys
 195 200 205
 Trp Cys Gln Cys Cys Pro His Thr Cys Cys Cys Tyr Val Arg Cys Pro
 210 215 220
 Cys Cys Pro Asp Lys Cys Cys Pro Glu Ala Leu Tyr Ala Ala Gly
 225 230 235 240
 Lys Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Ile Tyr
 245 250 255
 Thr His Leu Ser Pro Ala Lys Thr Pro Pro Pro Pro Ala Met Ile
 260 265 270
 Pro Met Arg Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp Arg Thr Ser
 275 280 285
 Ser Val Gly Gly His Ser Ser Gln Val Pro Leu Leu Arg Glu Val Asp
 290 295 300
 Gly Ser Val Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile Gln Ala Asn
 305 310 315 320
 Gln Gln Asp Asp Ser Met Arg Val Leu Tyr Tyr Met Glu Lys Glu Leu
 325 330 335
 Ala Asn Phe Asp Pro Ser Arg Pro Gly Pro Pro Asn Gly Arg Val Glu
 340 345 350
 Arg Ala Met Ser Glu Val Thr Ser Leu His Glu Asp Asp Trp Arg Ser
 355 360 365
 Arg Pro Ser Arg Ala Pro Ala Leu Thr Pro Ile Arg Asp Glu Glu Trp
 370 375 380
 Asn Arg His Ser Pro Arg Ser Pro Arg Thr Trp Glu Gln Glu Pro Leu

385	390	395	400												
Gln	Glu	Gln	Pro	Arg	Gly	Gly	Trp	Gly	Ser	Gly	Arg	Pro	Arg	Ala	Arg
		405				410									415
Ser	Val	Asp	Ala	Leu	Asp	Asp	Ile	Asn	Arg	Pro	Gly	Ser	Thr	Glu	Ser
		420				425									430
Gly	Arg	Ser	Ser	Pro	Pro	Ser	Ser	Gly	Arg	Arg	Gly	Arg	Ala	Tyr	Ala
															435
						440									445
Pro	Pro	Arg	Ser	Arg	Ser	Arg	Asp	Asp	Leu	Tyr	Asp	Pro	Asp	Asp	Pro
															450
						455									460
Arg	Asp	Leu	Pro	His	Ser	Arg	Asp	Pro	His	Tyr	Tyr	Asp	Asp	Leu	Arg
															465
						470					475				480
Ser	Arg	Asp	Pro	Arg	Ala	Asp	Pro	Arg	Ser	Arg	Gln	Arg	Ser	His	Asp
															485
											490				495
Pro	Arg	Asp	Ala	Gly	Phe	Arg	Ser	Arg	Asp	Pro	Gln	Tyr	Asp	Gly	Arg
															500
											505				510
Leu	Leu	Glu	Glu	Ala	Leu	Lys	Lys	Gly	Ala	Gly	Glu	Arg	Arg	Arg	
															515
											520				525
Val	Tyr	Arg	Glu	Gly	His	Tyr	Pro	Pro							
															530
											535				540
Ala	Pro	Pro	Pro	Tyr	Ser	Glu	Thr	Asp	Ser	Gln	Ala	Ser	Arg	Glu	Arg
															545
											550				555
Arg	Met	Lys	Lys	Asn	Leu	Ala	Leu	Ser	Arg	Glu	Ser	Leu	Val	Val	
															560
											565				570
															575

<210> 19
<211> 526
<212> PRT
<213> Mus musculus

<400> 19
Met Ala Pro Ala Ala Ser Ala Cys Ala Gly Ala Pro Gly Ser His Pro
1 5 10 15
Ala Thr Thr Ile Phe Val Cys Leu Phe Leu Ile Ile Tyr Cys Pro Asp
20 25 30
Arg Ala Ser Ala Ile Gln Val Thr Val Pro Asp Pro Tyr His Val Val
35 40 45
Ile Leu Phe Gln Pro Val Thr Leu His Cys Thr Tyr Gln Met Ser Asn
50 55 60
Thr Leu Thr Ala Pro Ile Val Ile Trp Lys Tyr Lys Ser Phe Cys Arg
65 70 75 80
Asp Arg Val Ala Asp Ala Phe Ser Pro Ala Ser Val Asp Asn Gln Leu
85 90 95
Asn Ala Gln Leu Ala Ala Gly Asn Pro Gly Tyr Asn Pro Tyr Val Glu
100 105 110
Cys Gln Asp Ser Val Arg Thr Val Arg Val Val Ala Thr Lys Gln Gly
115 120 125
Asn Ala Val Thr Leu Gly Asp Tyr Tyr Gln Gly Arg Arg Ile Thr Ile
130 135 140
Thr Gly Asn Ala Gly Leu Thr Phe Glu Gln Thr Ala Trp Gly Asp Ser
145 150 155 160
Gly Val Tyr Tyr Cys Ser Val Val Ser Ala Gln Asp Leu Asp Gly Asn
165 170 175
Asn Glu Ala Tyr Ala Glu Leu Ile Val Leu Val Tyr Ala Ala Gly Lys
180 185 190
Ala Ala Thr Ser Gly Val Pro Ser Ile Tyr Ala Pro Ser Ile Tyr Thr
195 200 205
His Leu Ser Pro Ala Lys Thr Pro Pro Pro Pro Ala Met Ile Pro
210 215 220
Met Arg Pro Pro Tyr Gly Tyr Pro Gly Asp Phe Asp Arg Thr Ser Ser
225 230 235 240
Val Gly Gly His Ser Ser Gln Val Pro Leu Leu Arg Glu Val Asp Gly
245 250 255
Ser Val Ser Ser Glu Val Arg Ser Gly Tyr Arg Ile Gln Ala Asn Gln

260	265	270
Gln Asp Asp Ser Met Arg Val Leu	Tyr Tyr Met Glu Lys	Glu Leu Ala
275	280	285
Asn Phe Asp Pro Ser Arg Pro	Gly Pro Pro Asn Gly Arg	Val Glu Arg
290	295	300
Ala Met Ser Glu Val Thr Ser	Leu His Glu Asp Asp	Trp Arg Ser Arg
305	310	315
Pro Ser Arg Ala Pro Ala Leu	Thr Pro Ile Arg Asp Glu	Glu Trp Asn
325	330	335
Arg His Ser Pro Arg Ser Pro	Arg Thr Trp Glu Gln Glu	Pro Leu Gln
340	345	350
Glu Gln Pro Arg Gly Gly	Trp Gly Ser Gly Arg Pro	Arg Ala Arg Ser
355	360	365
Val Asp Ala Leu Asp Asp	Ile Asn Arg Pro Gly Ser	Thr Glu Ser Gly
370	375	380
Arg Ser Ser Pro Pro Ser Ser	Gly Arg Arg Gly Arg Ala	Tyr Ala Pro
385	390	395
Pro Arg Ser Arg Ser Arg Asp	Asp Leu Tyr Asp Pro Asp	Asp Pro Arg
405	410	415
Asp Leu Pro His Ser Arg Asp	Pro His Tyr Tyr Asp Asp	Leu Arg Ser
420	425	430
Arg Asp Pro Arg Ala Asp Pro	Arg Ser Arg Gln Arg Ser	His Asp Pro
435	440	445
Arg Asp Ala Gly Phe Arg	Ser Arg Asp Pro Gln Tyr Asp	Gly Arg Leu
450	455	460
Leu Glu Ala Leu Lys Lys	Gly Ala Gly Glu Arg Arg	Arg Val
465	470	475
Tyr Arg Glu Glu Glu Glu	Glu Gly His Tyr Pro Pro	Ala
485	490	495
Pro Pro Pro Tyr Ser Glu Thr	Asp Ser Gln Ala Ser Arg	Glu Arg Arg
500	505	510
Met Lys Lys Asn Leu Ala Leu	Ser Arg Glu Ser Leu Val	Val
515	520	525

<210> 20
<211> 18
<212> DNA
<213> Homo Sapiens

<220>
<221> misc_binding
<222> 1..18
<223> sequencing oligonucleotide PrimerPU

<400> 20
tgtaaaacga cggccagt

18

<210> 21
<211> 18
<212> DNA
<213> Homo Sapiens

<220>
<221> misc_binding
<222> 1..18
<223> sequencing oligonucleotide PrimerRP

<400> 21
caggaaacag ctatgacc

18

<210> 22
<211> 20
<212> DNA

<213> Artificial Sequence

<220>
<223> oligonucleotide sense primer

<400> 22
ctacaacccc tacgtcgagt 20

<210> 23
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide anti sense primer

<400> 23
aggcggagat cggcagtcgt 20

<210> 24
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide sense primer

<400> 24
cctttgtcca cgtcggttac gctc 24

<210> 25
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide anti sense primer

<400> 25
tcacacgtt gccctgcttg 20

<210> 26
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide sense primer

<400> 26
ttactgctcc gtgggtctcag c 21

<210> 27
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide anti sense primer

<400> 27
agctactcct gtcaacgtct cc 22

<210> 28
<211> 167
<212> PRT
<213> Bos taurus

<400> 28
Met Arg Cys Gly Pro Leu Tyr Arg Phe Leu Trp Leu Trp Pro Tyr Leu
1 5 10 15
Ser Tyr Val Glu Ala Val Pro Ile Arg Lys Val Gln Asp Asp Thr Lys
20 25 30
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
35 40 45
Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro
50 55 60
Gly Leu His Pro Leu Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala
65 70 75 80
Ile Tyr Gln Gln Ile Leu Thr Ser Leu Pro Ser Arg Asn Val Val Gln
85 90 95
Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala
100 105 110
Ala Ser Lys Ser Cys Pro Leu Pro Gln Val Arg Ala Leu Glu Ser Leu
115 120 125
Glu Ser Leu Gly Val Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val
130 135 140
Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Arg Gln
145 150 155 160
Leu Asp Leu Ser Pro Gly Cys
165

<210> 29
<211> 146
<212> PRT
<213> Canis familiaris

<400> 29
Val Pro Ile Arg Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr
1 5 10 15
Ile Val Ala Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser Ser
20 25 30
Lys Gln Arg Val Ala Gly Leu Asp Phe Ile Pro Gly Leu Gln Pro Val
35 40 45
Leu Ser Leu Ser Arg Met Asp Gln Thr Leu Ala Ile Tyr Gln Gln Ile
50 55 60
Leu Asn Ser Leu His Ser Arg Asn Val Val Gln Ile Ser Asn Asp Leu
65 70 75 80
Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Ser Ser Lys Ser Cys
85 90 95
Pro Leu Pro Arg Ala Arg Gly Leu Glu Thr Phe Glu Ser Leu Gly Gly
100 105 110
Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser Arg
115 120 125
Leu Gln Ala Ala Leu Gln Asp Met Leu Arg Arg Leu Asp Leu Ser Pro
130 135 140
Gly Cys
145

<210> 30
<211> 163
<212> PRT
<213> Gallus gallus

<400> 30
Met Cys Trp Arg Pro Leu Cys Arg Leu Trp Ser Tyr Leu Val Tyr Val

1 5 10 15
Gln Ala Val Pro Cys Gln Ile Phe Gln Asp Asp Thr Lys Thr Leu Ile
20 25 30
Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Ser Val Ser
35 40 45
Ala Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro
50 55 60
Ile Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln
65 70 75 80
Val Leu Thr Ser Leu Pro Ser Gln Asn Val Leu Gln Ile Ala Asn Asp
85 90 95
Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Phe Ser Lys Ser
100 105 110
Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp
115 120 125
Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser
130 135 140
Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln Leu Asp Ile Ser
145 150 155 160
Pro Glu Cys

<210> 31
<211> 146
<212> PRT
<213> Gorilla gorilla

<400> 31
Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr
1 5 10 15
Ile Val Thr Arg Ile Ser Asp Ile Ser His Thr Gln Ser Val Ser Ser
20 25 30
Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Ile
35 40 45
Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln Ile
50 55 60
Leu Thr Ser Met Pro Ser Arg Asn Met Ile Gln Ile Ser Asn Asp Leu
65 70 75 80
Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser Cys
85 90 95
His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly Gly
100 105 110
Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser Arg
115 120 125
Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser Pro
130 135 140
Gly Cys
145

<210> 32
<211> 167
<212> PRT
<213> Homo sapiens

<400> 32
Met His Trp Gly Thr Leu Cys Gly Phe Leu Trp Leu Trp Pro Tyr Leu
1 5 10 15
Phe Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys
20 25 30
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
35 40 45
Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro
50 55 60
Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala

65	70	75	80
Val Tyr Gln Gln Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln			
85	90	95	
Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala			
100	105	110	
Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu			
115	120	125	
Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val			
130	135	140	
Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln			
145	150	155	160
Leu Asp Leu Ser Pro Gly Cys			
165			

<210> 33

<211> 167

<212> PRT

<213> Macaca mulatta

<400> 33

Met Tyr Trp Arg Thr Leu Trp Gly Phe Leu Trp Leu Trp Pro Tyr Leu			
1	5	10	15
Phe Tyr Ile Gln Ala Val Pro Ile Gln Lys Val Gln Ser Asp Thr Lys			
20	25	30	
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr			
35	40	45	
Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro			
50	55	60	
Gly Leu His Pro Val Leu Thr Leu Ser Gln Met Asp Gln Thr Leu Ala			
65	70	75	80
Ile Tyr Gln Gln Ile Leu Ile Asn Leu Pro Ser Arg Asn Val Ile Gln			
85	90	95	
Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala			
100	105	110	
Phe Ser Lys Ser Cys His Leu Pro Leu Ala Ser Gly Leu Glu Thr Leu			
115	120	125	
Glu Ser Leu Gly Asp Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val			
130	135	140	
Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln			
145	150	155	160
Leu Asp Leu Ser Pro Gly Cys			
165			

<210> 34

<211> 167

<212> PRT

<213> Mus musculus

<400> 34

Met Cys Trp Arg Pro Leu Cys Arg Phe Leu Trp Leu Trp Ser Tyr Leu			
1	5	10	15
Ser Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys			
20	25	30	
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr			
35	40	45	
Gln Ser Val Ser Ala Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro			
50	55	60	
Gly Leu His Pro Ile Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala			
65	70	75	80
Val Tyr Gln Gln Val Leu Thr Ser Leu Pro Ser Gln Asn Val Leu Gln			
85	90	95	
Ile Ala Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala			
100	105	110	

Phe Ser Lys Ser Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro
115 120 125
Glu Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val
130 135 140
Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln
145 150 155 160
Leu Asp Val Ser Pro Glu Cys
165

<210> 35

<211> 146

<212> PRT

<213> Ovus aries

<400> 35

Val Pro Ile Arg Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr
1 5 10 15
Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser Ser
20 25 30
Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Leu
35 40 45
Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala Ile Tyr Gln Gln Ile
50 55 60
Leu Ala Ser Leu Pro Ser Arg Asn Val Ile Gln Ile Ser Asn Asp Leu
65 70 75 80
Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Ala Ser Lys Ser Cys
85 90 95
Pro Leu Pro Gln Val Arg Ala Leu Glu Ser Leu Glu Ser Leu Gly Val
100 105 110
Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu Ser Arg
115 120 125
Leu Gln Gly Ser Leu Gln Asp Met Leu Arg Gln Leu Asp Leu Ser Pro
130 135 140
Gly Cys
145

<210> 36

<211> 146

<212> PRT

<213> Pan troglodytes

<400> 36

Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr
1 5 10 15
Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser Ser
20 25 30
Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Ile
35 40 45
Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln Ile
50 55 60
Leu Thr Ser Met Pro Ser Arg Asn Met Ile Gln Ile Ser Asn Asp Leu
65 70 75 80
Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser Cys
85 90 95
His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly Gly
100 105 110
Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser Arg
115 120 125
Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser Pro
130 135 140
Gly Cys
145

<210> 37
<211> 146
<212> PRT
<213> Pongo pygmaeus

<400> 37
Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys Thr
1 5 10 15
Val Ile Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser Ser
20 25 30
Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro Ile
35 40 45
Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln Ile
50 55 60
Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln Ile Ser Asn Asp Leu
65 70 75 80
Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser Cys
85 90 95
His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Arg Leu Gly Gly
100 105 110
Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser Arg
115 120 125
Leu Gln Arg Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser Pro
130 135 140
Gly Cys
145

<210> 38
<211> 167
<212> PRT
<213> Rattus norvegicus

<400> 38
Met Cys Trp Arg Pro Leu Cys Arg Phe Leu Trp Leu Trp Ser Tyr Leu
1 5 10 15
Ser Tyr Val Gln Ala Val Pro Ile His Lys Val Gln Asp Asp Thr Lys
20 25 30
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
35 40 45
Gln Ser Val Ser Ala Arg Gln Arg Val Thr Gly Leu Asp Phe Ile Pro
50 55 60
Gly Leu His Pro Ile Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala
65 70 75 80
Val Tyr Gln Gln Ile Leu Thr Ser Leu Pro Ser Gln Asn Val Leu Gln
85 90 95
Ile Ala His Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala
100 105 110
Phe Ser Lys Ser Cys Ser Leu Pro Gln Thr Arg Gly Leu Gln Lys Pro
115 120 125
Glu Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val
130 135 140
Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Ile Leu Gln Gln
145 150 155 160
Leu Asp Leu Ser Pro Glu Cys
165

<210> 39
<211> 167
<212> PRT
<213> Sus scrofa

<400> 39
Met Arg Cys Gly Pro Leu Cys Arg Phe Leu Trp Leu Trp Pro Tyr Leu

1 5 10 15
Ser Tyr Val Glu Ala Val Pro Ile Trp Arg Val Gln Asp Asp Thr Lys
 20 25 30
Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Ser Asp Ile Ser His Met
 35 40 45
Gln Ser Val Ser Ser Lys Gln Arg Val Thr Gly Leu Asp Phe Ile Pro
 50 55 60
Gly Leu His Pro Val Leu Ser Leu Ser Lys Met Asp Gln Thr Leu Ala
 65 70 75 80
Ile Tyr Gln Gln Ile Leu Thr Ser Leu Pro Ser Arg Asn Val Ile Gln
 85 90 95
Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala
 100 105 110
Ser Ser Lys Ser Cys Pro Leu Pro Gln Ala Arg Ala Leu Glu Thr Leu
 115 120 125
Glu Ser Leu Gly Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val
 130 135 140
Val Ala Leu Ser Arg Leu Gln Gly Ala Leu Gln Asp Met Leu Arg Gln
 145 150 155 160
Leu Asp Leu Ser Pro Gly Cys
 165

<210> 40
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<213> Homo sapiens

<400> 40
Glu Thr Leu Asp
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<400> 41
Gln Lys Pro Glu
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<210> 42
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<212> PRT
<213> Homo sapiens

<400> 42
Leu Asp Ser Leu Gly Gly
1 5

<210> 43
<211> 4
<212> PRT
<213> Homo sapiens

<400> 43
Glu Lys Leu Glu
1

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Glu Lys Pro Glu
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Glu Lys Pro Asp
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<400> 46
Thr Pro Asp Ser Leu
1 5

<210> 47
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<400> 47
Gly Leu Gln Thr Leu Asp Ser Leu Gly
1 5

<210> 48
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Gly Gly Val Leu Glu
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1 5

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<400> 50
Ser Leu Gly Gly Val Leu Glu Ala Ser
1 5

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1 5

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<400> 52
Pro Asp Ser Leu Gly Gly
1 5

<210> 53
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<400> 53
Leu Gly Gly Val Leu Glu Ala
1 5

<210> 54
<211> 22
<212> PRT
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<400> 54
Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser Cys
1 5 10 15
His Leu Pro Trp Ala Ser
20

<210> 55
<211> 22
<212> PRT
<213> Homo sapiens

<400> 55
Leu Leu His Val Leu Ala Phe Ser Lys Ser Cys His Leu Pro Trp Ala
1 5 10 15
Ser Gly Leu Glu Thr Leu
20

<210> 56
<211> 22
<212> PRT
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<400> 56
Ala Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr
1 5 10 15
Leu Asp Ser Leu Gly Gly
20

<210> 57
<211> 22
<212> PRT
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<400> 57
Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly
1 5 10 15

Gly Val Leu Glu Ala Ser
20

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<211> 18
<212> PRT
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<400> 58
Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly Gly Val
1 5 10 15
Leu Glu

<210> 59
<211> 14
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<400> 59
Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly Gly Val
1 5 10

<210> 60
<211> 21
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<400> 60
Ala Ser Gly Leu Glu Thr Asp Ser Leu Gly Gly Val Leu Glu Ala Ser
1 5 10 15
Gly Tyr Ser Thr Glu
20

<210> 61
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<400> 61
Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly
1 5 10

<210> 62
<211> 22
<212> PRT
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<400> 62
Thr Leu Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr
1 5 10 15
Glu Val Val Ala Leu Ser
20

<210> 63
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<212> PRT
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Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu
1 5 10 15
Ser Arg Gly Gln Gly Ser
20

<210> 64
<211> 22
<212> PRT
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<400> 64
Glu Asn Leu Arg Asp Leu Leu His Leu Leu Ala Phe Ser Lys Ser Cys
1 5 10 15
Ser Leu Pro Gln Thr Ser
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<210> 65
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<400> 65
Leu Leu His Leu Leu Ala Phe Ser Lys Ser Cys Ser Leu Pro Gln Thr
1 5 10 15
Ser Gly Leu Gln Lys Pro
20

<210> 66
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Ala Phe Ser Lys Ser Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys
1 5 10 15
Pro Glu Ser Leu Asp Gly
20

<210> 67
<211> 22
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<400> 67
Cys Ser Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp
1 5 10 15
Gly Val Leu Glu Ala Ser
20

<210> 68
<211> 18
<212> PRT
<213> Mus musculus

<400> 68
Leu Pro Gln Thr Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp Gly Val
1 5 10 15
Leu Glu

<210> 69
<211> 14
<212> PRT
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<400> 69
Gln Thr Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp Gly Val
1 5 10

<210> 70
<211> 22
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<400> 70
Thr Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp Gly Val Leu Glu Ala
1 5 10 15
Ser Leu Tyr Ser Thr Glu
20

<210> 71
<211> 10
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<400> 71
Ser Gly Leu Gln Lys Pro Glu Ser Leu Asp
1 5 10

<210> 72
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Lys Pro Glu Ser Leu Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr
1 5 10 15
Glu Val Val Ala Leu Ser
20

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<400> 73
Asp Gly Val Leu Glu Ala Ser Leu Tyr Ser Thr Glu Val Val Ala Leu
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Ser Arg Leu Gln Gly Ser
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<400> 74
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ttcgcg 67

<210> 75
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<400> 75
tgtccacgtc gtttacgctc 20

<210> 76
<211> 20
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<400> 76
tcccacttcc gttccttgtc 20

<210> 77
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<220>
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<400> 77
cctactccaa gtcmgtcctg ttgcatt 27

<210> 78
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gaccctggcc tgtacctacc taccagatgt tttcaucugg uaggttcagg gcagggucgc 60
gcgtttt 67

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<211> 21
<212> DNA
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<400> 79
tggtgtatcc tcttccagcc t 21

<210> 80
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<400> 80
ccagatgacg atgggttgc 19

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<210> 88
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<400> 88
gatgccagg aggaggaaga 20

<210> 89
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<220>
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<400> 89
caacaccata ckgaccgacg gaa 23

<210> 90
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acgcattggga atcatggc 18

<210> 91
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<220>
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<400> 91
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<210> 97
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<211> 21
<212> DNA
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<220>
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aaggtcgcct atggcaga c 21

<210> 103
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<220>
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gtgggagccc gggggcttga 20

<210> 104
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ccgggagtgac gcagggggta 20

<210> 106
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<212> DNA
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<223> oligonucleotide zinc finger LSR sequences

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gtggctgcac aaggtcgccc 19